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EPIDEMIC MENINGITIS IN THE FIRST THREE MONTHS OF LIFE*

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The literature on epidemic meningitis in infancy is meager. Studies of meningitis in early infancy with reviews of the literature have been made by Barron,[1] Root,[2] and Cooke and Bell,[3] and an interesting case of epidemic meningitis has been recently reported by Sturtevant.[4] In view of the undoubted fact that a considerable number of cases are never reported, it does not seem important to make a very careful study of the literature with an attempt to collect the number of cases.

It appears to be a general belief that all forms of meningitis are rare in early infancy. Barron [1] writes, "Although meningitis is a disease quite common in childhood, it is one that is extremely rare during the early months of infancy." Sturtevant [4] states: "Meningococcus meningitis is an extremely rare disease in early infancy." Similar statements are made by Root [2] and by Cooke and Bell.[3] It is our impression, from our own experience, that meningitis occurs in infants more often than is generally believed.

During the sixteen years that we have been studying meningitis and meningeal conditions in New York City, we have had the opportunity of seeing a fairly large number of cases of meningitis of all types in young babies. It seems worth while, therefore, to report our experience. We are limiting our study to those cases occurring during the first three months of life.

TABLE 1.—*Etiologic Distribution of Epidemic Meningitis During First Three Months of Life*

Meningococcus	Streptococcus	Pneumococcus	Tubercle Bacillus	Colon Bacillus	Influenza Bacillus	Micrococcus Catarrhalis	Total
25	11	7	5	3	2	1	54

During this time we have seen fifty-four cases with the etiologic distribution shown in table 1. A glance at the table shows the great preponderance of cases due to the meningococcus. This group is also the most important from the standpoint of treatment.

* From the Division of Applied Therapy, Department of Health, City of New York.

* Read before the Section on Pediatrics, New York Academy of Medicine, Jan. 13, 1927.

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4. Sturtevant, J. M.: Meningococcus Meningitis with Recovery in 7 Weeks Old Infant, J. A. M. A. **86**: 1436 (May 8) 1926.

SYMPTOMATOLOGY

It is not generally recognized that the symptoms of meningitis in infancy are quite different from those in older children and in adults. Since the symptoms of all purulent forms of meningitis are practically the same, we will discuss in detail the symptoms of epidemic meningitis.

While the onset is usually fairly acute, it is rarely so sudden as in later life. Practically always the disease is ushered in with a disturbance of the gastro-intestinal tract. The stools are usually loose and greenish or slimy. Vomiting is by no means as constant a symptom as in older children and adults. It was absent in ten of our twenty-five cases. These gastro-intestinal symptoms do not yield to the ordinary methods of treatment. There is practically always an irregular fever. The child is usually irritable and hyperesthetic. There may be convulsions early, but these are not so severe as those that occur later in the disease. Convulsions are not a constant feature. They were present in practically half of our cases in the early stages. The classic signs of meningitis, such as rigidity of neck and the Kernig sign, are usually entirely absent until the case is well advanced. The reflexes at the beginning are normal, as a rule. A bulging fontanel is practically always found. A hemorrhagic rash is very unusual in infants.

On account of the obvious difficulties in diagnosis, we are usually called in consultation when the disease is fairly well advanced. It cannot be too strongly urged that a lumbar puncture should be done early in infants when the diagnosis is indefinite. Netter says: "Think of meningitis and do a lumbar puncture in every infant sick without apparent cause."

TREATMENT AND COURSE OF THE DISEASE

A certain number of cases of epidemic meningitis clear up very readily with the serum treatment. The fatal cases do not often terminate quickly, the course of the disease usually being three weeks or more. It occasionally happens that a patient who has apparently recovered develops hydrocephalus, and dies several months after the acute stage has terminated.

In a number of instances in which ventricular puncture was done and the serum administered by that route, the fluid became sterile but the adhesions remained. In only two of this group of cases was ventricular puncture followed by recovery, and it is doubtful whether a real basilar meningitis had developed in these instances. One older child, not in this series, recovered after ventricular puncture. In several instances we have been able to obtain only a small amount of fluid or have had dry taps, and yet serum has been administered by gravity with complete recovery.

We have followed a very conservative line of treatment. It is our custom to do a daily lumbar puncture, removing as much fluid as possible and injecting serum by gravity. If 20 cc. or more of fluid is obtained, we do not hesitate to inject about 20 cc. of serum, provided it runs in easily and the patient does not show untoward symptoms. We usually inject a smaller amount of serum than we obtain fluid. But if the amount of fluid is very small we may inject somewhat more serum, the quantity depending on the ease with which it runs in and the condition of the patient. It is necessary to exercise more than ordinary care in removing fluid and injecting serum in these young babies. We do not hesitate to perform ventricular or cisternal puncture if there are definite signs of blocking. Certain workers in meningitis have advocated very early ventricular puncture, but the results thus far published have not been such as to encourage us in adopting it.

We continue the injections of serum as long as there are organisms present in the spinal fluid. Even after the fluid becomes sterile, the serum treatment is continued if the clinical conditions seem to indicate it. Lumbar puncture for the relief of pressure—no serum being administered—may be necessary during convalescence.

TABLE 2.—*Data on Cases of Epidemic Meningitis in Infancy*

Date	Case	Age	Sex*	Intraspinal Injections	Intraventricular Injections	Outcome	Comment	Sequelae
4/ 2/14	1	3 mo.	Not recorded	3	0	Died	Conjunctivitis	
2/ 9/15	2	3 mo.	♀	1	5	Died	Basilar meningitis	
10/28/15	3	3 mo.	♂	3	0	Recovered	.....	Deaf
5/19/16†	4	7 wk.	♂	4	0	Died	Parents refused treatment	
6/12/16	5	3 mo.	♂	5	0	Recovered	Macular papular rash	None
7/20/16	6	3 mo.	♂	4	0	Recovered	Arthritis of knee	None
12/24/16	7	3 mo.	♀	5	0	Recovered	.....	None
2/ 1/16†	8	2 mo.	♂	2	0	Died	Treatment refused	
5/ 4/17	9	3 mo.	♂	2	1	Died	Basilar meningitis	
5/13/17	10	3 mo.	♂	1	1	Recovered	Unable to trace	
6/ 2/17	11	3 mo.	♀	5	0	Died		
8/23/18	12	10 wk.	♂	4	0	Recovered	.....	None
3/18/19	13	3 mo.	♂	4	0	Recovered	.....	None
4/21/19	14	3 wk.	♂	4	0	Died	Hydrocephalus developed 3 mo. after acute symptoms	
3/ 4/20	15	11 wk.	♀	8	3—	Died	Basilar meningitis	
7/30/21	16	3 wk.	♂	3	17	Died	Basilar meningitis; fluids became sterile	
7/ 5/21	17	3 mo.	♂	0	Several	Died	Basilar meningitis	
11/ 5/21‡	18	3 mo.	♀	0	..	Recovered	.....	None
4/20/22	19	3 mo.	♂	8	0	Recovered	.....	None
1/ 6/23	20	3 mo.	♂	7	11	Died	Basilar meningitis	
7/23/23	21	3 mo.	♀	Several	Several	Died	Basilar meningitis; left hospital against advice	
1/ 2/25	22	3 mo.	♂	7	0	Recovered	.....	None
4/ 3/26	23	11 wk.	♂	2	0	Died	Hypersensitive to serum	
4/29/26	24	5 wk.	♂	6	0	Recovered	.....	None
1/19/26	25	2 mo.	♀	3	2	Recovered	.....	None

* In this table, ♂ indicates male and ♀ female.
† Not counted in statistics, as treatment was refused.
‡ One lumbar puncture, no serum; prompt recovery.

The general treatment is that of any other acute infection. It is important to disturb the infant as little as possible. It is necessary to keep the child well nourished.

MORTALITY

In our group of twenty-five cases, two are not included in the mortality as treatment was refused. Of the remaining twenty-three patients, eleven died, a mortality of 47.8 per cent. This is somewhat higher than our mortality during the first year of life, 46 per cent, and far exceeds our mortality during the second year of life, 29.2 per cent.

REPORT OF CASE

It may be of interest to report in detail the treatment employed in our youngest patient to recover.

D. I., an Italian boy, aged 5 weeks, seen, April 29, 1926, had become ill ten days before, when the infant was 25 days old. The onset had been sudden with vomiting, severe convulsions, and a temperature of 104 F.

When the baby was examined, the convulsions and vomiting were persisting and the temperature was still 104 F. The fontanel was bulging. The head was retracted. The patellar and pupillary reflexes were normal. Otherwise, the physical examination was negative.

At the first lumbar puncture, 20 cc. of turbid fluid was obtained and 15 cc. of antimeningitis serum administered. April 30, the baby's general condition was improved. Fluid was not obtained on lumbar puncture, but 10 cc. of serum ran in easily by gravity.

May 1, 5 cc. of turbid fluid was obtained, and 10 cc. of serum administered.

May 2, 3 and 4, spinal fluid could not be obtained, but on each occasion 10 cc. of serum ran in easily by gravity.

After the first lumbar puncture the fontanel ceased to bulge and the infant showed progressive improvement. The vomiting and convulsions ceased and the temperature fell to normal, May 4.

The baby has been kept under close observation for eight months, and it has remained well.

This is a case in which many would have resorted to ventricular puncture or cisternal puncture, and would have attributed the recovery to these methods of treatment. This case is by no means an isolated instance of recovery when little or no fluid has been obtained on several occasions, and yet serum has been administered intraspinally with equally good results.

SEQUELAE

The sequelae were surprisingly few. Of the twelve patients who recovered, one could not be traced. Of the eleven that could be followed up, one is deaf and the other ten have made a complete recovery.

Table 2 gives the more important data in regard to our cases of epidemic meningitis.

The Ideal Surgeon.—Surgery is not only a question of operating. The surgeon in the last generation has had immense and unprecedented opportunity for research. Of these he has not failed to avail himself. He has not only brought relief to countless numbers of patients, but his investigations have created new knowledge, and have corrected old knowledge, as to the causes and conditions of disease. He has become very expert as a craftsman. But more than craftsmanship is needed. It is now his duty to concern himself with all relevant inquiries as to the condition of his patient before operation, to change those conditions to his patient's advantage, and to control his patient after operation, in order that the safety and the permanent success of his operation may be ensured.—Moynihan, Berkeley: *Lancet* **2**:794 (Oct. 16) 1926.

THE USE OF PARATHYROID EXTRACT IN HEMORRHAGE *

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There is perhaps no manifestation of disease which arouses so much concern as hemorrhage. It points without question to the presence of diseased or injured tissue, and not infrequently life depends on the early recognition of the cause and its effective control. When superficial structures are involved, ligation, cautery, pressure and local hemostatic agents are usually efficient means of therapy. However, in hemorrhage from internal sources these are of doubtful value, obviously because certain parts are inaccessible or unsatisfactory for local treatment. Furthermore, the general condition of the patient may not justify surgical intervention. It may be wiser to utilize conservative measures and to aid the normal protective mechanisms of the body.

A mechanism of great importance is that of blood coagulation. Failure of this mechanism to function normally may lead to prolonged and fatal bleeding. It is well, therefore, always to consider its efficiency, whether or not surgical methods are applicable. This may be accomplished by estimating the rapidity of coagulation and by determining the presence and the amount of the substances involved.

According to Howell,[1] calcium is important in the process of clotting. This is proved in jaundice, in which there may exist a prolonged clotting time depending, among other things, on some interference with the availability of calcium. In addition, calcium is believed to influence the permeability of blood vessels.[2] That its administration is of value in the treatment of hemorrhage has naturally been suggested. In 1898, Wright and his followers, according to Funk,[3] advocated its use in hemophilia and in uterine bleeding, regardless of the calcium content of the blood. At various times it has also been used in hemorrhage from the gastro-intestinal tract and in hemoptysis in pulmonary tuberculosis. Its reliability, however, has been seriously questioned by Hare.[4] Furthermore, because of certain untoward influences, such as gastric irritation following oral administration and general systemic reactions when given intravenously, it has fallen largely into disuse. A controversy has also occurred regarding the absorption of calcium from the intestinal tract. Kahn and Roe[5] reported an increase of 108 per cent after the administration of 5 Gm. of calcium. Bauer and Ropes[6] obtained a maximum increase of 28.5 per cent after 10 Gm., and 14 per cent after 5 Gm. of calcium lactate was given. Hjort[7] found that a minimum dose of 1.5 Gm. per kilogram of body weight is necessary for the induction of hypercalcemia in normal dogs. Bergeim[8] suggests that there are individual differences due to chemical factors in the gastro-intestinal tract. These may influence absorption and thus be responsible for the variable results noted.

At present, in parathyroid extract, as elaborated by Collip,[9] there is an agent which can effectively and consistently increase the amount of calcium in the circulating blood. In a previous investigation[10] it was found that a definite decrease in the clotting time of the blood occurred, beginning about four hours after injection and reaching a minimum in from ten to fifteen hours. From this point there was a gradual return to normal, the preinjection level being attained in from twenty to thirty hours. This information was utilized in a study of hemoptysis in pulmonary tuberculosis.[11] It was found that hemorrhage was effectively controlled in a majority of instances following the subcutaneous administration of from one to five doses of 10 to 15 units (individuals weighing in excess of 50 Kg. were given 15 units) of parathyroid extract every thirty to thirty-six hours. This occurred although a normal calcium content of the blood was present before injection. At the beginning of the study the injections were continued indefinitely in patients who did not respond to treatment. This was found to be without value.

The present study was undertaken to obtain further data on the prevention and treatment of hemorrhage arising from various sources. In addition to patients observed in the Jefferson Hospital, a number were treated in the Pennsylvania Hospital and in the White Haven Sanatorium under Dr. Elmer H. Funk, and at the Abington Memorial Hospital under Dr. Walter T. Annon. The former dosage of parathyroid extract (from 10 to 15 units every thirty to thirty-six hours[12]) was used except in a few instances in which from 15 to 20 units were administered every twenty to twenty-four hours. The plan of treatment was to continue the injections until cessation of hemorrhage occurred, and then to administer one dose after thirty-six hours. So far as possible other treatment was discontinued. The series includes hemorrhage from the following sources: the respiratory system, the majority of which were instances of pulmonary bleeding; the gastro-intestinal and genito-urinary tracts, and operative incisions in various parts. The extract was also administered to patients with jaundice, and in other conditions in which the clotting time of the blood was prolonged.

It was noted that parathyroid extract appeared to control hemorrhage in the majority of instances. When administered preoperatively in jaundice it reduced the coagulation time of the blood to within normal limits, and the operative field was unusually free from bleeding. The significance of these data, however, is less striking when it is realized that hemorrhage often ceases without any form of treatment being instituted. A point in favor of the cessation being due to the effect of the extract was the control of hemorrhage in a number of patients after prolonged rest, sedatives and

* From the medical service of Dr. Thomas McCrae and the Department for Diseases of the Chest, Jefferson Hospital.
* A part of the expense for this investigation was defrayed by a grant in memory of Roland L. Taylor, Jr., Gwynedd Valley, Pa.

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12. The preparation of hormone used was para-thor-mone, supplied by Eli Lilly and Company through the kindness of Dr. G. H. A. Clowes and Dr. J. H. Warvel.

various hemostatic agents had failed, and in addition, the return of hemorrhage after its administration had been prematurelly discontinued. An effort was made to determine the cause for failure. It appeared that large vessel erosions, lessened retractability of vessels, or certain local changes in the tissues were present in the uncontrolled hemorrhages. Insufficient time to permit a maximum hormone effect (a definite increase of calcium in the blood and a lowered coagulation time do not occur until three hours following injection) was often a cause for failure. In not a few instances, as observed in the former study,[11] large dosage and prolonged use of the extract appeared to increase the amount of bleeding. As would be expected, hemorrhage due to blood dyscrasia failed to respond to treatment. So far as clinical trial is dependable, therefore, this study suggests that a transient increase or a series of transient increases in the calcium content of the blood favors the cessation of hemorrhage. This may occur regardless of a normal concentration of calcium before injection. The study also emphasizes the futility of continued administration or high dosage if the first few injections fail to produce a favorable result.

Parathyroid Extract in Hemorrhage

Disease or Surgical Condition	Number Treated	Favorable Result *	Approximate Number of Doses †
Pulmonary tuberculosis	101	88	2-5
Bronchiectasis	2	2	2
Pulmonary abscess	7	4	2-5
Pulmonary prebronchoscopy treatment ‡	4	4	1
Pulmonary postbronchoscopy treatment	3	3	1
Jaundice (preoperative)‡	11	10	1
Jaundice (postoperative)	3	3	2
Uterine: Fibroids	3	1	3
Fibroids (preoperative)‡	5	5	1
Postpartum hemorrhage	5	5	1
Menorrhagia (cause undetermined)	4	4	2-3
Bladder, carcinoma	3	1	3
Prostatectomy	4	3	2
Gastric ulcer	8	5	2
Gastric neoplasm	3	3	2
Gastrostaxis?	4	4	2
Intestinal (cause undertermined)	2	2	2
Intestinal ulcers	2	1	2
Hemorrhoids (postoperative)	1	1	1
Ocular, foreign body	2	2	2
Ocular, cataract (postoperative)	1	1	1
Nasal, turbinates (postoperative)	3	3	1
Nasal, septum (postoperative)	9	9	1
Nasal, ulceration	4	2	2
Nasal, hypertension	2	2	1
Tonsillar (preoperative)‡	12	9	1
Tonsillar (postoperative)	122	118	1
Laryngectomy	3	3	1
Wounds	5	2	1
Carbuncle (postoperative)	1	1	1
Supplemental bleeding (pulmonary, during menstruation)§	2	2	3
Puerperal hemorrhagia	3	0	3
Hemorrhagia neonatorum	2	0	2

* When a decrease or the cessation of the hemorrhage occurred within five to nine hours after administration, the result was attributed to the effect of parathyroid hormone.

† In a few instances of persistent hemorrhage, administration was continued indefinitely without favorable effect.

‡ Parathyroid extract was administered because of prolonged clotting time. The result was determined by noting character of operative field and estimating changes in clotting time.

§ Administration was started twenty-four hours before expected bleeding and continued for six to eight days.

SUMMARY

1. To a series of 347 patients with hemorrhage from various causes, parathyroid extract was administered.

2. Cessation occurred in 304 patients following one or more transient increases in the calcium content of the circulating blood.

3. The most favorable results followed the administration of from ten to fifteen units every thirty-six hours for one to three doses.

4. As a preoperative measure in jaundice, it reduced the coagulation time to within normal limits and apparently prevented hemorrhage.

5. The unfavorable results occurred when overdosage and prolonged administration were employed. In addition, unfavorable results occurred in blood dyscrasia (puerperal hemorrhage and hemorrhagic disease of the new-born) irrespective of the size and number of doses, apparently because of certain local changes in the tissues.

6. As compared with the common experiences with oral and intravenous administration of calcium the results are more dependable, and furthermore gastric irritation and other untoward effects are avoided. The hormone was found to be of special value in patients recovering from surgical operations who were unable to tolerate oral therapy.

7. The use of parathyroid extract is suggested as a means for controlling hemorrhage because it effectively mobilizes calcium salt, which is normally stored in the body and which is necessary for clotting.

1832 Spruce Street.

THE ENIGMA OF ECTOPIC PREGNANCY *

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The art and the science of medicine advance by a process of slow evolution. While it is true that the research worker occasionally makes a discovery that materially alters our conception of a diagnostic or a therapeutic problem, as a rule the clinician is compelled to rely on his personal observations, intellectual exercise, and a study of the current literature for his own professional progress.

Even in the light of past experience, ectopic gestation always taxes our diagnostic resources and surgical judgment. Its etiology seems mysterious; it is not characterized by pathognomonic symptoms; the differential diagnosis is difficult, and its immediate treatment often a matter of debate. Except for acute appendicitis, it supplies the operating table with more emergent and tragic cases than any other lesion of the lower abdomen. I have attempted a graphic portrayal of the different types of clinical problems, in an effort to elucidate the underlying pathologic condition and to simplify the selection of those therapeutic measures which may be expected to reduce the hazard of the inevitable laparotomy.

When the ovum is extruded from the graafian follicle, it lies free in the peritoneal cavity and is attracted into the fallopian tube by the action of the ciliated epithelium. The spermatozoa reach the ovum by their own motility, and fecundation occurs in the tubal lumen (fig. 1). In cases of sterility due to tubal disease the ovum and spermatozoon never meet, because the advancement of one or the other is obstructed by obliteration of the lumen of the mucosa (fig. 2). If the ciliated epithelium of the tube is intact and physiologically active, the fertilized ovum is propelled into the uterine cavity and a normal pregnancy ensues (fig. 3). But if the cilia are absent or fail to function at the uterine end of the tube, the products of conception

* Read before the Hudson County Medical Society, Jersey City, Jan. 4, 1927.

remain at the site of impregnation and continue their growth undisturbed. Tubal retention of the gestation sac is known as ectopic pregnancy.

The chief causes of extra-uterine pregnancy are gonorrhea, pelvic peritonitis and puerperal sepsis. After an inflammatory or suppurative process in the fallopian tube has subsided, and nature has endeavored to repair the injury sustained by the tubal walls, the lumen may reopen sufficiently to allow the entrance of the ovum and spermatozoa; but if the epithelial regeneration is incomplete throughout the length of the tube, the escape of the fertilized ovum from the tube into the uterus is arrested. Extrinsic pressure, sacculations in the tubal wall, and crippled peristalsis interfere with migration of the ovum in much the same manner. The main etiologic factor in tubal disease is pyogenic infection, acquired either by continuity of surface or through the lymphatics. In many cases of puerperal sepsis, pyogenic micro-organisms are transmitted to the tube by an acute exacerbation of a chronic cervical infection, aroused by the trauma of labor.

The ectopic gestation sac is usually found in the ampulla (near the fimbriated extremity of the tube), in the isthmus, or near the uterine cornu. Tubo-ovarian pregnancy is the result of an abnormal contact between the tube and the ovary, produced by preexisting pathologic conditions; as the graafian follicle ruptures, the ovum is impregnated by a spermatozoon which has traversed the entire length of the tube. Interstitial pregnancy is rare, and occurs when the assistance rendered by the ciliated epithelium fails just as the fertilized ovum is about to reach the uterine cavity. Most tubal pregnancies are ampullar or isthmic.

Fig. 1.—Feritlization of the ovum.

Soon after the products of conception establish themselves in the fallopian tube, the local hyperemia is tremendously increased. The stroma cells become decidua cells and the muscular fibers hypertrophy. The cells of the trophoblast penetrate the tubal wall, weaken the musculature, and finally perforate into the peritoneal cavity, unless the embryo is extruded through the fimbriated end of the tube beforehand (tubal abortion). The muscular fibers of the wall are not very sturdy, and although they hypertrophy, they are in constant danger of rupture because of the steadily increasing intratubal tension and the arrosive action of the developing gestation sac. Consequently, from the time the embryo begins its growth, the patient is in constant jeopardy from internal hemorrhage, either from tubal abortion or from early rupture. As the tube enlarges, there is a parallel growth of the uterus with the formation of an endometrial decidua, but intra-uterine chorionic villi are absent.

Extra-uterine pregnancy may terminate as a tubal abortion, by rupture directly through the tubal wall, by rupture between the two layers of the broad ligament (unusual), or by escaping from the tube into the uterine cavity (rare). The ultimate location of the extra-uterine pregnancy depends on how long the embryo lives. So long as it continues its growth within the lumen of the tube, it is spoken of as tubal pregnancy. If the embryo is ejected from the fimbriated end of the tube and remains viable, it becomes an abdominal pregnancy. While some cases of apparently true ovarian pregnancy have been reported, I believe that they were really tubo-ovarian.

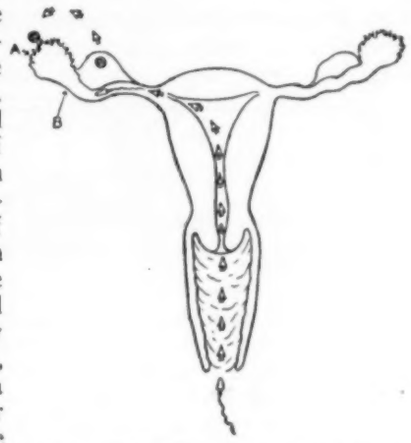

Fig. 2.—Sterility due to tubal disease: *A*, sealed fimbriae; *B*, inflammation; tuberculosis; external pressure; malformation.

The cardinal symptoms of ectopic gestation are delayed menstruation, attacks of pain with sudden onset in one of the lower abdominal quadrants, bloody vaginal discharge, only slight fever, a unilateral tender mass near the uterus, and collapse of the patient. In my experience, the blue discoloration of the umbilicus, described by Cullen, has been an occasional rather than a constant sign. The symptomatology is extremely variable, and two consecutive patients seldom present the same clinical picture. More cases are atypical than typical. A history of a missed menstrual period preceding irregular hemorrhage from the uterus is perhaps the most constant symptom. Before the menopause, when a woman who has menstruated regularly goes over her period two, five, ten, fifteen or eighteen days, and then has irregular bleeding, ectopic pregnancy should be presumed until the contrary is proved. A patient should never be curetted for an "incomplete abortion" until the presence of an extra-uterine pregnancy has been excluded.

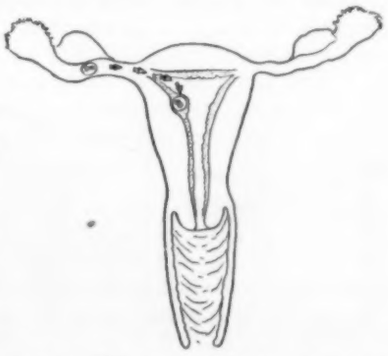

Fig. 3.—Uterine implantation of the fertilized ovum.

The patient usually experiences a sudden pain in the lower abdominal quadrant corresponding to the site of the gestation sac. As a rule, the pain is cramplike. It may be slight or agonizing, and there is generally a simultaneous sensation of faintness or actual fainting. The attacks may be repeated frequently or there may be long intervals between them. During the intervals the patient is conscious of some soreness in the lower abdomen. Although the pain and gestation sac are usually on the same side, I have recently had a patient whose symptoms were localized on the right side, while the sac was on the left. I have had two others who were entirely free from pain; in each instance the sac was found intact at operation, without evidence of intraperitoneal bleeding.

The loss of blood from the vagina varies greatly in amount, and the metorrhagic blood itself has a slippery

consistency that imparts a characteristic sensation to the tactile sense of the fingers. In most cases, a tender mass near the uterus can be palpated and sometimes a distinct pulsation can be appreciated. The mass is exquisitely sensitive, and may be ruptured by comparatively little force. Hence, palpation should be extremely gentle. As the products of conception develop, the mass enlarges, but the temperature does not rise correspondingly. Patients with ectopic gestation seldom have hyperpyrexia, and what fever they do have is due to the peritoneal reaction excited by the escape of blood from the tube. Collapse of the patient without prodromal warning is a very serious symptom and indicates profuse internal hemorrhage.

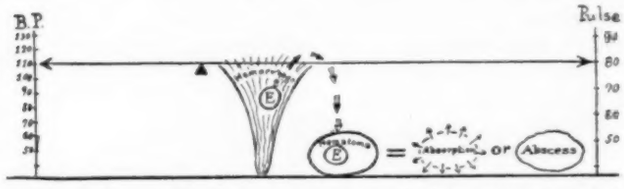

Fig. 4.—Early tubal abortion: group 1; early intraperitoneal rupture; pelvic hematoma.

The leukocyte count rises in direct proportion to the amount of intraperitoneal bleeding and peritoneal irritation, but the leukocytosis is not accompanied by a corresponding increase in the polymorphonuclear cells, as it is in cases of acute salpingitis. The white cell count usually lies somewhere between 10,000 and 15,000. If the count is above 16,000 in a case of salpingitis, operation is best postponed until the leukocytosis is reduced. Therefore if the exact diagnosis is uncertain and the count is less than 16,000, an abdominal section is within the limits of safety, even should a pyosalpinx be found. The menstrual history is especially significant in differentiating ectopic pregnancy from adnexal inflammatory conditions. Both are often accompanied by irregular vaginal bleeding, but whereas in cases of adnexal disease the patient menstruates before the expected date, in tubal pregnancy the onset of the flow is invariably delayed. This one point has been of great value to me on many occasions when I was confronted with a difficult diagnostic problem. The activity of an acute suppurative process in the fallopian tube is manifested by a much higher rise in temperature than that accompanying ectopic pregnancy.

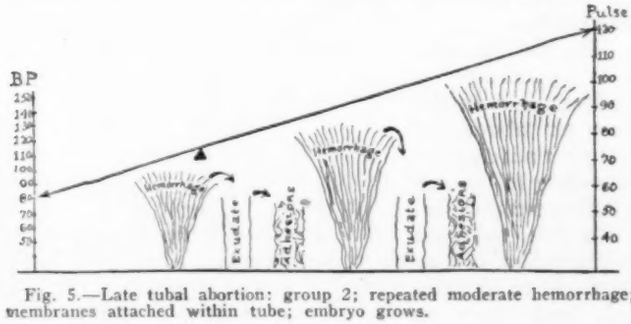

Fig. 5.—Late tubal abortion: group 2; repeated moderate hemorrhage; membranes attached within tube; embryo grows.

It is interesting to note that tubal gestation is often preceded by a long period of barrenness, and that patients suffer from secondary sterility for much the same reasons that the products of conception are retained in the tube. If regeneration of the ciliated epithelium of the tube does not take place after an inflammatory condition, the patient is permanently sterile; if the epithelium is partially restored, ectopic gestation is apt to follow.

The differential diagnosis between ectopic gestation and uterine abortion is of paramount importance, and every incomplete abortion should be regarded as a potential extra-uterine pregnancy. The distinction can be made by the more pronounced breast changes, the presence of Hegar's sign, and the cervical dilatation found in cases of abortion. It is significant, however, that 20 per cent of patients with ectopic gestation are curetted before the correct diagnosis is made.

CLINICAL CLASSIFICATION

Cases of ectopic pregnancy may be classified clinically in six different groups:

Group 1 represents the type terminating in early tubal abortion (fig. 4). A small quantity of blood containing the embryo emerges from the fimbriated extremity of the tube, and the hemorrhage is so moderate that the normal equilibrium of the pulse and the blood pressure is disturbed very little. The blood and embryo lodge in the culdesac, and further bleeding from the tube does not occur. Then one of two things happens: either the pelvic hematocele is absorbed and disappears entirely, or it degenerates and forms a small abscess. It is not unlikely that many of these cases pass unrecognized.

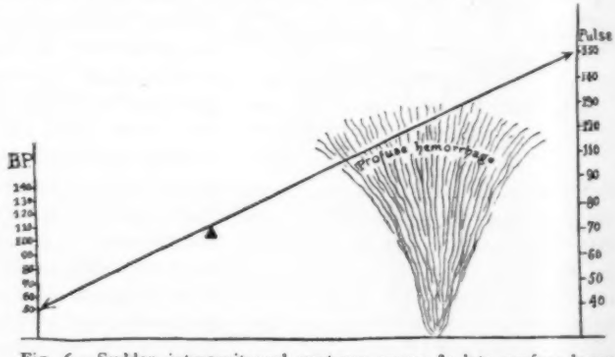

Fig. 6.—Sudden intraperitoneal rupture: group 3; late profuse hemorrhage; severe shock.

Group 2 represents the type in which there are repeated hemorrhages from the fimbriated end of the tube (fig. 5). These cases comprise the largest number of extra-uterine pregnancies and are the result of late tubal abortion. The embryo may be only partly or gradually extruded, and the membranes remain attached within the tube. Each time the bleeding is repeated, the pulse and blood pressure are disturbed a little more. The blood clots irritate the peritoneum, an exudate is thrown out, and adhesions form. In this group of patients particularly, attacks of pain, faintness, metrorrhagia, and abdominal soreness come on frequently. If the diagnosis is made early and operation performed promptly, a few blood clots are found in the pelvis and the adhesions are easily separated. But if the process goes on, the adhesions become organized, extensive agglutination of viscera complicates the situation, and the operative technical difficulties are greatly increased. If these cases are neglected long enough, there is a sudden escape of blood from the end of the tube or from a rent in the wall, and the entire clinical picture is changed; the patient is suddenly precipitated into the tragic stage.

Group 3 represents the type in which the embryo develops to a large size without any tendency to tubal

abortion (fig. 6). When the tube ruptures, profuse internal hemorrhage occurs, as a result of the tearing of the ovarian artery. The patient goes into shock and is found with a low blood pressure and very rapid pulse. These are tragic and emergent cases and require immediate treatment.

Group 4 represents the type in which the tube ruptures between the layers of the broad ligament to form an intraligamentous hematocele (fig. 7). This is a fortunate accident, because the tension of the two peritoneal layers of the broad ligament restricts the amount of bleeding and the hemorrhage is spontaneously arrested; hence there is very little disturbance of the pulse rate and blood pressure. The hematoma is situated low in the pelvis and can be palpated easily.

Group 5 represents the type in which the gestation sac develops in the cornu of the uterus, concerning the termination of which we can only theorize (fig. 8). Unless it remains interstitial, it is difficult to demonstrate that pregnancy has actually preexisted in the tube; for if it passes through the uterine cornu into the cavity, it is of course possible that it might either be converted into a uterine abortion or attach itself to the endometrium and go to term. A few cases of interstitial pregnancy discovered at the operating table have been reported.

Group 6 represents the type in which the embryo escapes from the tube without causing much hemorrhage, remains viable, attaches itself somewhere on the peritoneal surface, and develops free in the peritoneal cavity (fig. 9). Several patients carrying a full term abdominal pregnancy have been delivered by laparotomy. If the fetus dies before full term, it may form an adipocere or lithopedion.

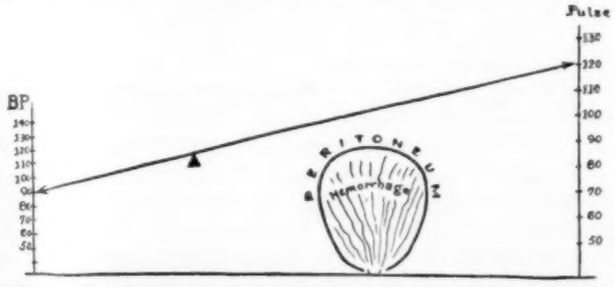

Fig. 7.—Intraligamentous hematocele: group 4; rupture into broad ligament; usually hematoma.

I desire to stress the difference in the clinical picture between the patients coming within group 2 and those found in group 3. Those having small repeated hemorrhages usually suffer from attacks of paroxysmal pelvic pain and fainting, and have more or less irregular bleeding from the vagina. Not infrequently a decidual cast is thrown off from the uterus and the patient volunteers the information that a piece of "skin" has come away. As a rule, there is evidence of pelvic peritonitis. On the other hand, the patient whose tube ruptures suddenly often does not have a forewarning of the impending catastrophe and is precipitated into a state of shock and collapse when the rupture occurs. A case of this sort is a real tragedy, because by the time the patient comes under observation the pulse is weak, thready and very rapid, and the blood pressure tremendously depressed. The pressure is more apt to be under than over 50 mm.

TREATMENT

When a diagnosis of tubal pregnancy before rupture has been established, the patient should be operated on immediately. It is better to operate on ten patients and discover that the diagnosis was wrong than to make a single error of omission.

Patients coming within group 1 may be treated expectantly, by posterior colpotomy or by laparotomy. A colpotomy is also useful in distinguishing a hematosalpinx from a pyosalpinx. Laparotomy is seldom necessary in these cases.

Patients in group 2, if not in shock, should be operated on as soon as the diagnosis is made. If the woman is in moderate shock, she should be kept absolutely quiet; the foot of the bed should be raised, external heat applied, and physiologic sodium chloride hypodermoclysis, and plenty of morphine administered. The systolic blood pressure should be taken every half hour, and the treatment continued as long as the pressure continues to rise. I agree with Welton that as soon as it reaches 100 or 105 laparotomy is indicated. If it fails to respond to these therapeutic measures within half an hour, or if it rises and then falls, operation should not be delayed any longer. It is unwise to continue palliative treatment after the blood pressure reaches 105, because of the danger of the rising pressure blowing off the clot and increasing the hemorrhage. Intravenous injections or blood transfusion should not be given until the source of the hemorrhage has been controlled. Once the bleeding point has been clamped, infusion or transfusion may be safely begun.

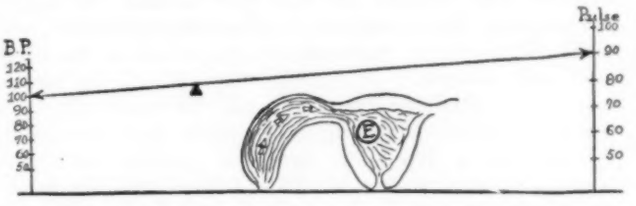

Fig. 8.—Interstitial pregnancy: group 5; rupture into uterine cavity; abortion or on to term.

Patients suffering from the effects of profuse internal hemorrhage constitute the so-called tragic cases, and unanimity of opinion is still lacking regarding their emergent treatment. It is always desirable to transport the patient to a hospital if possible. She should be kept in a horizontal position, not permitted to move, and fortified with generous quantities of morphine and external heat. The diagnosis can be made from the history and the general physical condition of the patient. Vaginal examinations, enemas, purgatives and curettage are all contraindicated. Hypodermoclysis is useful. As soon as the bleeding vessel has been clamped, blood transfusion may be given concurrently with the rest of the operation.

Fig. 9.—Abdominal pregnancy: group 6; early rupture; single hemorrhage; embryo remains viable (abdominal pregnancy; adipocere; lithopedion).

When a tubal pregnancy ruptures into the broad ligament, laparotomy should be performed; but this is an elective and not an emergent operation.

The treatment of patients coming within groups 5 and 6 is obvious.

580 Park Avenue.

STUDIES ON THE KAHN TEST

I. FIFTEEN THOUSAND EXAMINATIONS COMPARED WITH THE WASSERMANN TEST *

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Although there have appeared numerous articles on the Kahn test during the past several years, it is believed that studies on this test should be highly encouraged. Such studies, if sufficiently extensive, will throw further light not only on its value in the diagnosis and treatment of syphilis but also on its limitations. This, indeed, was our aim in undertaking a series of studies on this test—to obtain a picture of its reliability as a diagnostic agent in syphilis, its sensitiveness in detecting this disease, and its sources of error, from the point of view both of the serologist and of the clinician and syphilologist.

The present study is based on 15,000 Kahn tests compared with the Wassermann. The blood specimens used were those received in the laboratory of the Ohio Department of Health for the serum diagnosis of syphilis. Such specimens are received daily in quantities of from 150 to 400, and are submitted by state institutions, venereal disease clinics and private physicians. A small number are delivered the day the blood is collected, but the majority are from 24 to 48 hours old. A few are 72 hours old or more on reaching the laboratory. Specimens were not selected according to clinical histories but were taken in consecutive order as received on the day comparative tests were to be made.

The Wassermann technic [1] used in this series was the same as that used for several years in this laboratory. We shall not enter into a discussion here of the merits of one or another Wassermann method. Opinions are so widely divergent on this subject that the task of unification seems almost hopeless. Suffice it to say that we have continued the use of this Wassermann method largely because our comparative studies with it and other methods have not seemed to warrant a change, and because careful inquiry among the large number of physicians who use this laboratory has indicated a minimum number of serious discrepancies between the serologic and clinical data.

The Kahn test was conducted exactly as outlined by its author.[2] The different lots of Kahn antigen used in this series were carefully checked against antigen kindly furnished by Dr. Kahn for control purposes. In all cases in which there was disagreement between the Wassermann and Kahn tests, retests with both methods were made if there was sufficient serum. The Kahn test was made on each serum the same day the serum was tested with the Wassermann.

It is customary in this laboratory to have different persons read the Wassermann results, one serologist making the immediate reading, another making the overnight reading. In these comparative studies we had at least two different workers read all Kahn tests also. The latter were read independently of the Wassermann tests or records in order to avoid any influence on the observer.

In the accompanying table are presented the total examinations, the reaction obtained, and the percentages of agreement. These examinations are tabulated by the method used in Kahn's reports' in order to give direct comparison with the figures he has obtained in his extensive series. It will be seen that our results show a considerably larger percentage of disagreements than Kahn reports but that they are quite similar to the results obtained by a number of other laboratories; i. e., about 4 or 5 per cent complete disagreement. The percentages of "absolute" and "relative check" vary somewhat in the reports of different workers, but these variations would seem to be of minor importance.

Fifteen Thousand and Forty-Nine Kahn Tests Compared with the Wassermann Test

	Kahn	Wassermann Test		
Reaction	Number of Examinations	Positive	Doubtful	Negative
Positive	3,646	2,966	264	416
Doubtful	577	127	77	373
Negative	10,826	235	221	10,370

PERCENTAGE CHECK OF KAHN TEST WITH WASSERMANN TEST

Total Examinations	Absolute Check	Relative Check	No Check
15,049	89.13	6.54	4.32

Positive reaction = ++++, +++ and ++.
Doubtful reaction = + or ±.
Absolute check = positive or negative by both methods.
Relative check = positive or negative by one method and doubtful with the other.

It will be seen from these results that in a total of 15,049 specimens there was complete agreement between the Kahn and Wassermann reactions in 13,413, or 89.13 per cent, and relative agreement in 985 specimens, or 6.54 per cent. In the remainder of the specimens, 651, or 4.32 per cent, there was complete disagreement between the two tests. In 239 cases of the latter number, the available clinical data were either too meager or too indefinite to establish or eliminate a diagnosis of syphilis. Of the remaining 412 cases, 383 were in the various stages of syphilis. Among these there were 286 cases giving Kahn positive-Wassermann negative reactions, and ninety-seven cases giving Wassermann positive-Kahn negative results. Finally, twenty-nine cases in which the results with the Kahn and Wassermann tests disagreed are grouped separately, since they possibly have some bearing on the question of nonspecific reactions with either test. Of these, ten were Wassermann positive-Kahn negative reactions, and were diagnosed by the attending physician as "herpes genitalia," "chancroid," "nephritis," "scabies," "enlarged prostate," "no visible signs," "gingival ulcer," "insanity," "inflammatory tumor of breast" and "tinea circinata." In the remaining nineteen cases the reactions were Kahn positive-Wassermann negative, and the diagnoses given were "ununited fracture," "myocarditis," "neuritis," "tumor of liver," "sacro-iliac disease," "nephritis and myocarditis," "iritis," "rheumatism," "periostitis," "mixed ulcer," "pregnancy," "insanity," "alopecia," "eruption," "chronic mastoiditis," "secondary anemia," "paralysis of sixth nerve" and two of "herpes genitalia." It is apparent that very few of these could be classed as definitely nonsyphilitic on the clinical evidence pre-

* From the Division of Laboratories, Ohio Department of Health.

1. This technic employs the sheep system with a cholesterinized antigen (0.4 per cent) at 37 C. as the most sensitive, and the Kolmer antigen with four hours at icebox temperature as a more conservative test.

2. Kahn, R. L.: Serum Diagnosis of Syphilis by Precipitation—Governing Principles, Procedure and Clinical Application of the Kahn Precipitation Test, Baltimore, Williams and Wilkins Company, 1925.

sented, and the fact that they were subjected to blood tests would indicate some suspicion of their being syphilitic. In any event it appears that this small number of doubtful clinical cases showing positive Kahn or Wassermann reactions indicates that both tests in this series could be considered highly specific.

Among the principal factors that might contribute to the variations between the Kahn and Wassermann results reported by different workers, perhaps the following are of major importance: the type of Wassermann test used for comparison; the types of cases studied, and the method of performing the Kahn test. The latter involves not only the personal factor of reading the tubes and interpreting the results, but also the questions of whether the earlier or the later Kahn technic was employed, and whether there was much deviation from the detail procedure recommended by Kahn. The striking fact is that so many studies involving these and possibly other factors have yielded about the same final results; viz., about 96 per cent agreement between the Kahn and Wassermann reactions. We believe from our experience that the discrepancy between these percentages and those reported by Kahn and his co-workers does not exceed or perhaps does not equal the discrepancy one would encounter in comparing different Wassermann methods. This belief is supported by evidence presented in a number of reports of comparative studies on the Wassermann test.

We shall not attempt to make a detailed comparison here between our percentages and those obtained by Kahn and other workers. However, for those who wish to make such comparisons, we desire to point out, in connection with the major factors mentioned, that we have considered our Wassermann test as sensitive as would be safe to use in routine tests for diagnosis; the Kahn technic [2] was followed in detail; our custom of having two persons read all Wassermann and Kahn tests has had a tendency to reduce to a minimum the personal equation in reading and interpreting results, and the types of cases included in these studies were fairly representative of those examined in private or public laboratories doing considerable serologic work.

SUMMARY

In a comparative study of the Kahn and Wassermann tests in 15,049 cases, it was found that in 89.13 per cent of the cases there was complete agreement with the two methods; in 6.54 per cent, relative agreement, and in 4.32 per cent, disagreement. Of the last group, representing 651 cases, 383 of the patients were in the various stages of syphilis. Of the latter number, 286 gave positive Kahn-negative Wassermann reactions, and ninety-seven gave positive Wassermann-negative Kahn reactions. The clinical evidence available in this study indicated a high degree of specificity in both the Kahn and Wassermann tests.

CONCLUSIONS

1. The Kahn test is as specific and is somewhat more sensitive than the Wassermann technic used in this laboratory.

2. The Kahn test is a simpler procedure than the Wassermann, and it requires less time in making a diagnosis. However, its simplicity should not be overemphasized. As much skill and experience in serology are required to perform a reliable Kahn test as are required for a reliable Wassermann test.

3. Since the Kahn test employs fewer reagents, it is subject to somewhat less variation than the Wassermann, and it appears to offer more hope of uniform practice among laboratories in the serologic diagnosis of syphilis.

4. On the basis of these observations, it is planned to utilize the Kahn test in a routine manner with the Wassermann in the laboratories of the Ohio Department of Health until further data indicate the respective merits of the two tests as applied to our work.

CHRONIC PYOCYANEUS INFECTION

GASTRO-INTESTINAL LOCALIZATION WITH FATAL OUTCOME

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Although *Bacillus pyocyaneus* is a fairly frequent contaminating organism in wounds and other infections, it rarely obtains a foothold in man, so that fatal infections are rather rare. In the case reported in this paper, the infection was of at least three months' duration. Starting in the mouth or the esophagus it extended throughout the alimentary tract and into the lungs, and was transferred secondarily to the skin of the hands. The symptoms resembled those of gastric carcinoma or pellagra.

Cases like this are quite infrequent, although the gastro-intestinal tract comes next in frequency after the skin as a location for *Bacillus pyocyaneus*. Several epidemics of summer diarrhea in children have been associated with it, and Calmette [1] incriminated it in a peculiar epidemic of dysentery in China. These were acute infections, however, clearing up very rapidly. Two of Barker's [2] patients had a condition similar to that of our patient. In the first case, operation for appendicitis was followed by peritonitis. Necropsy disclosed extensive necrotic and membranous inflammation of the whole alimentary tract. In the esophagus, particularly, there were ulcers and necrotic areas penetrating down into the submucosa. The lymphoid tissues were hyperplastic. *Bacillus pyocyaneus* was found on the surface of the small intestine in enormous numbers, almost in pure culture. The intestinal wall was thin and flaccid, the bowel dilated as if paralyzed. The second case occurred in a man operated on for acute abdominal symptoms suggesting obstruction. The intestine was found greatly distended, probably paralyzed, and markedly congested and friable. Rupture occurred, and death followed from peritonitis. At necropsy there was found necrosis and ulceration of the intestine, with enlarged suppurating mesenteric lymph nodes. Large masses of *Bacillus pyocyaneus* were found on the mucosa of the intestine, and the organism was obtained in pure culture from the lymph nodes. Another case, reported in Charrin's original studies on *Bacillus pyocyaneus,* was characterized by acute esophagitis.

Cutaneous lesions due to pyocyaneus infection have usually been echthymatous in type, but may resemble

1. Calmette, A.: Arch. de méd. navale **60**: 207, 226, 335, 1893.
2. Barker, L. F.: The Clinical Symptoms, Bacteriological Findings and Postmortem Appearances in Cases of Infection of Human Beings with Bacillus Pyocyaneus, J. A. M. A. **29**: 213 (July 31) 1897.

acute exfoliative dermatitis or even leprosy. Pulmonary lesions also have been recognized. We would refer to the exhaustive studies of Perkins,[3] Waite,[4] Leonard Freeman [5] and Barker.[2]

As a rule, there is no generalized infection by *Bacillus pyocyaneus*. The organisms remain in their original location or extend by direct continuity. The clinical symptoms are, as a rule, due to the inflammation produced by their presence, and to the absorption of a toxin. This toxin is readily extracted from broth cultures by filtration, but is apt to cause serious wasting and even death when injected into experimental animals. Therefore the production of an antitoxin is attended with difficulties. This toxin seems to cause paralysis of smooth muscle, for when the intestine is affected there is great dilatation apparently due to paralysis, and marked intestinal hypomotility is observed clinically. In our case the gastric hypomotility was so extreme that obstructive retention was considered and exploratory laparotomy preformed. In cases of bronchial infection the bronchi are found greatly dilated, and like conditions are seen in infections of the urinary tract. There is rarely any general effect from pyocyaneus wound infection; indeed, the appearance of greenish pus is often a rather good sign, for the infection usually clears up readily. It might be mentioned that the green coloration is produced by the organism only when an abundant supply of oxygen is available. There is no greenish discoloration in internal infections. In these cases of superficial infection, provided the wound is draining, there usually is no absorption of toxin. Occasionally, however, great emaciation and prostration occur when *Bacillus pyocyaneus* infects wounds, suggesting the absorption of toxin.

REPORT OF CASE

H. W., aged 39, a native of Finland, developed a prison psychosis in a federal penitentiary, and was sent to St. Elizabeth's Hospital in September, 1925. Soon after being brought there he complained of weakness, malaise, indefinite pain in the abdomen and occasional nausea. He had pain beneath the sternum, particularly on swallowing solid food. There was gradual loss of weight with constipation. Shortly before his admission to the infirmary he developed an eruption over the wrists that resembled pellagra. Examination early in November disclosed an icteric tint of the skin, with red purpuric and scaly areas on the extensor surfaces of the hands and wrists, and to a lesser extent over the knees. The tongue was smooth and fiery red with white edges, and there was marked pyorrhea. Temperature, pulse and respiration were normal. The systolic blood pressure was 120, the diastolic, 70. The heart sounds were faint, without murmurs. The lungs were clear. Palpation of the abdomen disclosed marked tenderness in the right upper quadrant, but without rigidity. At one time, an indefinite mass was palpated. The tendon reflexes and the urine were normal. The blood count showed 11,000 white blood corpuscles per cubic millimeter, but otherwise nothing. Acid fast bacilli were not found in the sputum, and the roentgen-ray examination of the lungs was negative. The gastric contents were positive for occult blood and lactic acid, with a free hydrochloric acid content of 3, total of 8. The stool contained red blood cells, and a culture was positive for *Bacillus pyocyaneus*. Roentgen-ray examination of the digestive tract revealed a large gastric residue at the end of six hours with a constant deformity of the pylorus. This was believed to be either ulcer or carcinoma with obstruction, and laparotomy was recommended. Meanwhile repeated cultures of the mouth, anus, hands and knees had shown *Bacillus pyocyaneus*, often unmixed with other organisms. Local treatment decreased the severity of the symptoms and led to some clearing up of the inflammation, but the patient continued to complain of pain in the epigastrium. Finally, on consultation, it was decided to explore the abdomen with the expectation of finding an obstructive mass at the pylorus. The presence of *Bacillus pyocyaneus* was considered relatively unimportant, since it occurs so frequently in wound contamination, and also because its pathogenic possibilities were only dimly realized. Operation did not reveal any notable disease of the stomach. The gallbladder, which was slightly thickened and elongated, was removed, as was also the appendix. From the latter, *Bacillus pyocyaneus* was obtained in pure culture but the bile contained only *Bacillus coli*. The patient survived the operation, the wound healed promptly, and the dressings were discontinued sixteen days later. The patient's general condition did not improve, however, and death occurred, Dec. 19, 1925, four weeks after operation.

PATHOLOGIC OBSERVATIONS

Necropsy, performed eighteen hours after death, was limited to the surgical incision. The body was somewhat emaciated and very pale; the eyes were sunken and dry; the tissues, inelastic. The incision through the right rectus was fairly well healed, and when it was reopened, the tissues were firm. There were a few omental adhesions. The gallbladder fossa was tightly closed, and the stump of the appendix was in good condition. There was no free fluid in the peritoneal cavity, and the blood vessels of the intestine were small and not especially injected. Examination of the mouth revealed dull injection with superficial ulcerations of the tongue and gums. The pharynx could not be examined. The surface of the lower portion of the esophagus was dull red without ulceration. The stomach was of normal shape and size, regular in outline. The external surface was pale. The muscular and mucous coats were deep dull red, and there were numerous petechiae but no discrete ulcerations. The organ contained sticky mucus mixed with partially digested food particles stained dark gray red. The duodenum showed some injection and cyanosis of the peritoneal surface, and it was moderately distended but by no means ballooned. The muscular coat was thin; there was no edema, and the mucosa was rather soft and turgid, and dark grayish red. There were no ulcerations or hemorrhages. The same condition, although less marked in degree, was found in the rest of the small intestine. In the ileum it was limited to rather widely separated areas of from 10 to 15 cm. in length. There was no notable paralysis of the intestinal wall, although the coils were somewhat larger than normal. The large intestine was distended with gas. The peritoneal surface was smooth and shining, but discolored black and green, and the muscular coat was thin. The mucosa was reddish gray and covered over by soft grayish slime. Occasional small ulcers were to be seen, but there was no thickening of the base or extension through the peritoneal surface. The condition was the same in the rectum.

Microscopically, the intestine showed marked congestion of all coats with some edema, but no inflammatory reaction. The lymphoid bodies were not enlarged, and there was no notable cellular infiltration. Bacteria were not found in the substance of the intestine, although numerous rod forms were discerned on the mucosa. The colon showed considerable fibrosis in the submucous layer and a certain amount of cellular infiltration into the mucosa, with atrophy of the glandular elements. In one location the mucosa had disappeared over a small area, leaving a base made up of fibrous tissue markedly infiltrated by lymphocysts and other mononuclear elements. There was some fibrosis of the underlying coats but no leukocytic reaction. Here again, micro-organisms were not demonstrated in the tissue. The blood vessels appeared normal, and their walls did not contain bacteria.

The mesenteric lymph nodes, although enlarged, did not show disease either grossly or microscopically. The lymphatics were not thickened or inflamed. The liver was of average size, somewhat pale and firm, and showed normal markings on section. Cloudy swelling was to be recognized

3. Perkins, R. A.: Report of a Case of Infection with Bacillus Pyocyaneus, J. M. Research **6**: 281, 1911.
4. Waite, H. H.: A Contribution to the Study of Pyocyaneus Infection with a Report of Three New Cases, J. Infect. Dis., 1908, p. 542.
5. Freeman, Leonard: Chronic General Infection with Bacillus Pyocyaneus, Ann. Surg. **64**: 195 (Aug.) 1916.

only microscopically, and organisms were not demonstrable by staining sections. The Kupffer cells were large and numerous and contained brownish granules. The spleen showed marked congestion. The pancreas did not show lesions, and the kidneys were normal.

The thoracic cavity was explored through the diaphragm. The lung was pale and fluffy, and did not show consolidations, although a mild mononuclear infiltration was observed under the microscope. The heart showed some degenerative atrophy of the muscle fibers with fibrous tissue replacement. The valves were not investigated, however, since the organ was not removed. The endocrine organs within reach were not notably diseased.

In summary, there was acute congestion and catarrhal inflammation of the whole alimentary canal with a few ulcerations in the colon. There was moderate dilatation of the small intestine. Micro-organisms were abundant on the mucosal surface, but were not found in stained preparations in the muscular tissue or in the walls of blood vessels. The ulcers in the colon were associated with mild infiltration by lymphocytes and moderate fibrosis, but an acute suppurative process was not present.

In comparison with the observations in other cases of the disease, this pathologic picture showed certain departures from the usual condition. There was no general infection. The peritoneal surface was smooth, and the muscular and fibrous tissues were not invaded. Anemic necroses with many micro-organisms in their vicinity were lacking, and the common finding of large masses of bacteria in the walls of blood vessels was absent. While it seems probable that the infection by *Bacillus pyocyaneus* had extended through the intestinal canal, it was a surface infection and had not penetrated to the depths of the tissue. It is easy to understand how such an infection beginning in the mouth or esophagus could reach the lower parts, but less easy to explain why there was no evidence, aside from the few small ulcers in the colon, of penetration into the substance of the bowel. It seems to be generally admitted that *Bacillus pyocyaneus* does not cause a leukocytic reaction, and very often no reaction at all. The greenish black of the peritoneal coat was probably due to ordinary postmortem decomposition rather than to the specific pigment manufactured by the bacillus. This pigment, as we have noted, is manufactured only under aerobic conditions, while those of the intestinal canal are anaerobic.

BACTERIOLOGIC OBSERVATIONS

When the first cultures of the mouth were made, the cheeks, tongue and pharynx were beefy red, and the epithelium sloughed off in large patches when the mucous membrane was scraped for culture. Plantings on blood agar plates gave a heavy growth, almost in pure culture, of *Bacillus pyocyaneus*. Cultures from the tonsils, around the teeth, the tip of the tongue and the pharynx all gave similar results. Occasionally, a staphylococcus or a streptococcus was encountered. Identical results were reported on five different occasions. To rule out the possibility of yeast infection with secondary invasion of *Bacillus pyocyaneus*, cultures were attempted on tartaric acid glucose medium on two occasions, but with negative results. In order to assure ourselves that the infection was not mere surface contamination, the gum was anesthetized and sterilized by painting it with a 5 per cent phenol (carbolic acid) solution and a Pasteur pipet was introduced into the tissues. From the drop of fluid obtained, many colonies of pyocyaneus and a few of indifferent diplococcus were obtained. Similar precautions were observed in obtaining serum from the cutaneous lesions, but here again, *Bacillus pyocyaneus* predominated, with an occasional colony of *Staphylococcus albus*. Cultures of the mucosa of the appendix were positive for *Bacillus pyocyaneus*, and streptococci, although especially sought, were not found. From the gallbladder only *Bacillus coli* was cultivated. The stool was positive for *Bacillus pyocyaneus* on two occasions, and a culture for yeast failed to grow.

Finally, at necropsy, *Bacillus pyocyaneus* was obtained from the scrapings of the stomach, intestine and colon, from the interior cava and from the lung. The operative wound was not infected.

COMMENT

This patient showed progressively increasing weakness and emaciation resulting in death, for which there is only an infection of *Bacillus pyocyaneus* to account. There was severe stomatitis, which would seem to have been caused by that organism, since it was found so constantly and practically unassociated with other organisms. Although we have only slight evidence that the esophagus was involved, since the necropsy was limited, the pain on swallowing and the substernal discomfort manifested by the patient point to this condition. It may even have been primary here, since the pain appeared even before the gingivitis or stomatitis, and long before the enterocolitis. Since cultures of the organism were obtained from the mouth and feces during life, from the appendix at operation and from the stomach and intestines after death, there is little doubt of its pathogenic action in the causation of inflammation of the alimentary canal as a whole.

The spread of the infection throughout the alimentary canal could well be explained by mechanical distribution. The fact that the lesions in the stomach and intestine were less severe, as found at necropsy, than those in the mouth, as well as milder than those reported by Barker, would suggest that the infection of these parts occurred later in the course of the disease. The invasion of the inferior cava and lung, as shown by cultures, probably occurred in the agonal stage or even post mortem.

The weakness and emaciation, which extended over three months, may well have been due to the absorption of toxins from the digestive tract.

There is no evidence in the case of generalization of the infection. Blood culture during life was negative, and the sections did not show bacteria in the walls of vessels or elsewhere, as reported by Freeman and others. The infection of the hand may be assumed to have come from contact with the mouth, especially since the right hand was more severely affected than the left, but it does not so easily explain the dermatitis over the knees or the lack of it about the anus. As was noted above, the bile did not contain *Bacillus pyocyaneus*.

The hypomotility of the stomach and intestine, which was perhaps the most significant clinical observation and which really led to operation, may well have been due to the action of the toxin on the peripheral sympathetic nervous system. Barker's finding of paralysis of smooth muscle in organs infected with *Bacillus pyocyaneus* is very suggestive. Since it is improbable that the toxin is absorbed through healthy mucosa, the stomach may well have suffered from the absorption of toxins through other raw surfaces, as in the mouth and rectum. Since we know little of the relative sensitiveness of various parts of the alimentary canal to this paralyzing toxin, we cannot make this statement absolute.

The difficulty in diagnosis in this case was due to the fact that the symptoms of disease had become established before marked evidence of pyocyaneus infection was accumulated, and also to the disinclination to attribute so serious a condition to an organism that usually plays only a secondary rôle.

The Aim of Education.—Education is the preparation for life. It is a large and a noble part of life itself, and yet it finds its particular aim and purpose in the preparation for the life which is to come when the happy school days are over. Hence the purpose of education is to make the boy and girl willing and able to help in the realization of ideal values.—Münsterberg: Psychology and the Teacher, p. 65.

DANGERS OF INTRODUCING IODIZED OIL INTO THE TRACHEO-BRONCHIAL SYSTEM

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It is a matter of common observation that the advent of a new therapeutic or diagnostic measure may be accompanied by such a wave of enthusiasm in its favor that its field of acceptance and application early becomes extended beyond limits that are warranted by knowledge of its potential advantages or drawbacks—a knowledge which at first is inevitably incomplete. And it is not otherwise with the procedure indicated in the title of this paper. The truth of this reflection is being gradually attested in the rapidly increasing volume of the literature on this subject. One of us,[1] for instance, has already published two papers on the use of lipiodol, in the first of which his attitude was unreservedly favorable, while in the second, with larger experience, he urged caution in cases of tuberculosis. In the main, the articles hitherto published [2] emphasize the advantages of the method, though of late an occasional note of warning indicating one danger or another is sounded.[3] But rarely is any reason given for the conclusion arrived at, and still more seldom are cases illustrative of the complications mentioned reported.

At the outset it should be made quite clear that while we propose calling attention to the possible dangers of introducing an iodized oil into the tracheobronchial system, we are, nevertheless, firmly convinced of its great value as a diagnostic procedure, and this paper signifies no more than a note of warning. To judge from the general experience, including our own, the conclusion seems justified that the method is on the whole a safe one. But the unfavorable and even fatal complications already at hand, though few in number, are sufficient to warrant a close analysis of the various causes of possible trouble, in the hope of establishing definite contraindications to the use of the method. With these reservations, and without any desire to minimize the undoubted value of an excellent diagnostic means, we may now proceed to summarize the possible dangers of the procedure.

Though we intend to discuss primarily the particular oil going under the trade name of lipiodol, our remarks are applicable to any iodized oil at present on the market, all of which, although varying in the oil component, have practically the same iodine content. The Danish jodumbrin, and the German product jodipin are reported as being comparable in every way with lipiodol.[4]

Lipiodol is the French preparation of iodized vegetable oil which contains 40 per cent of iodine. It is this high percentage which renders it particularly favorable as an opaque substance to the roentgen rays. The iodine is said to be in chemical combination with the oil, which combination breaks up slowly once the oil is in the body, but is otherwise fairly stable. Its use in the diagnosis of diseases of the bronchopulmonary system was first reported by Forestier and Sicard [2] in 1922.

BACTERIOLOGY

Forestier [3] states, without citing any proof, that lipiodol is antiseptic. If this is the case, the belief might arise that no danger of infection would exist from any infective material which might be carried into the tracheobronchial tree at the time of the introduction of the oil. It is obvious that, in its passage through the upper respiratory tract, infective material may become more or less adherent to the oil and thereby be transported to the deeper pulmonary tissues. Hence it is necessary to know whether or not this danger of infection might be averted by any antiseptic action of lipiodol itself.

In order to determine whether or not the oil has any antiseptic action, Neuswanger [5] smeared agar plates with lipiodol and then with *Bacillus coli, Streptococcus hemolyticus* and *Staphylococcus aureus.* After incubation it was found that the organisms were growing in close proximity to the globules of oil, and an inhibitory action was not observed. He also exposed the oil to the air for months and did not note evidence of decomposition, or colonies of bacteria or fungi. He concluded that 40 per cent iodized oil does not have marked bactericidal or bacteriostatic properties.

With the same object in view, the following qualitative experiments were undertaken by one of us (A. L. B.):

Experiment 1.—Three cubic centimeters of lipiodol was mixed with an equal quantity of thick tenacious sputum taken from a patient with bronchiectasis, by drawing the material back and forth into a small glass syringe, until a mixture was obtained resembling a lather, the oil being in a fine state of subdivision and the sputum in very intimate contact with it. This was kept at room temperature for forty-eight hours and then streaked on various culture mediums and incubated. A luxuriant growth was obtained, including pseudodiphtheroids, pneumococci, staphylococci and *Micrococcus catarrhalis.*

Experiment 2.—Equal quantities of sputum and lipiodol were placed without mixing in a glass container, where they separated into layers. This was kept at room temperature for eighteen days, by which time the sputum had become decomposed and was found to be thoroughly mixed with the oil, not even fine globules of oil being discernible. This was then plated and incubated, and here likewise a profuse growth of organisms, including pseudodiphtheroids, short chain streptococci, and *Staphylococcus aureus,* were obtained.

Therefore we believe that no trust can be placed in any presumed antiseptic action of lipiodol; and we wish to point out especially that any organisms carried down with the lipiodol from the buccal cavity or tracheobronchial tree into the alveoli may remain an active source of infection. Moreover, it is conceivable that

1. Archibald, Edward: X-Ray Demonstration of Pulmonary Changes in Tuberculosis by Lipiodol Injection, Canad. M. A. J. **15**: 1000-1002 (Oct.) 1925; Value of Iodized Oil, Forty Per Cent, by the Bronchoscopic Method, Arch. Surg. **14**: 206 (Jan.) 1927.

2. Forestier, J., and Sicard, J. A.: General Method of Radiologic Exploration with Iodized Oil, Bull. et mém. Soc. méd. d. hôp. de Paris **46**: 463 (March) 1922. Sergent, Emile; and Cottenot, P.: The Radiologic Examination of the Respiratory Organs After Intratracheal Injection of Lipiodol, J. de radiol. et d'électrol. **7**: 441-448 (Oct.) 1923. Švejcar, J., and Dreuschuch, F.: Iodized Oil in Diagnosis of Bronchiectasis, Čas. lék. česk. **64**: 568-571 (Jan. 3) 1925. Ruggles, H. E., and Bryan, L.: Lipiodol in the Diagnosis of Chest Disease, California & West. Med. **23**: 1280 (Oct.) 1925. Nather, K., and Sgalitzer, M.: The Deglutition Method in Bronchial Skiagraphy, Zentralbl. f. Chir. **52**: 1534 (July 11) 1925.

3. Forestier, J.: Roentgenologic Exploration of the Bronchial Tubes with Iodized Oil (Lipiodol), Radiology **6**: 303 (April) 1926. Møller, P. F., and von Magnus, R.: Investigations of Bronchial Affections by Means of Iodine Preparations (Jodumbrin and Lipiodol), Acta. med. Scandinav. **63**: 174-184, 1925. Ballon, D. H.: Lipiodol in the Diagnosis of Bronchopulmonary Lesions by the Bronchoscopic Method, Arch. Otolaryng. **3**: 403-422 (May) 1926. Armand-Delille, P. E., and Moncrieff, A. M. B.: The Use of Lipiodol in the Diagnosis of Bronchiectasis, Brit. M. J. **2**: 7-8 (July 5) 1924.

4. Møller and von Magnus (footnote 3). Nather and Sgalitzer (footnote 2). Landau, W.: Die Roentgendiagnose der Bronchiectasie mittels Kontrastöl, Deutsche med. Wchnschr. **51**: 1115 (July 3) 1925; Die intratracheale Verwendung von Jodipin zur Kontrastdarstellung in der Roentgendiagnostik der Atmungsorgane, Klin. Wchnschr. **4**: 1861 (Sept. 24) 1925.

5. Neuswanger, C. H.: Iodized Oil as a Pyelographic Medium, Surg. Gynec. Obst. **43**: 169-176 (Aug.) 1926.

retained lipiodol may act as a plug and imprison organisms in the alveoli until they cause harm.

ELIMINATION AND ABSORPTION

Generally, a large percentage of the oil introduced is coughed up and either expectorated or swallowed. That which is expectorated is no longer of interest, but that which is swallowed may be rapidly absorbed and become a danger to the patient through iodine poisoning.[6] However, the great majority of reported cases of iodism have presented very mild symptoms; and Ballon [3] did not observe this complication in fifty consecutive cases in which lipiodol was injected.

The fate of that portion remaining in the lungs is always more or less uncertain. Absorption through the alveoli does occur. In experiments on cats, we found the oil present in a minute state of subdivision in many of the tissue elements that make up the pulmonary structure—even in the cartilage of the smaller bronchi. This was noted in sections of lung, stained with scharlach R, taken from animals that had been injected intratracheally with lipiodol some weeks previously. Thus, it is obvious that the oil is absorbed from the bronchial and alveolar lumina. The mechanism of this process of absorption is not fully understood. However, the recent work of Roger and Binet [7] may throw some light on the subject. They believe that the lung is not merely a membrane for filtering gases, but has besides an internal digestive power—a function that is most strikingly exhibited in its action on fats. They worked with intravenously injected oils, found the oil altered during its passage through the lung, and believe that the fat is split up by a true intravascular digestion in which oxidation plays the most important rôle. But they worked with the oil on the blood vessel side of the air-capillary membrane, while we are dealing with oil on the air side of this system, and therefore we cannot be sure that this is the mechanism by means of which the oil is absorbed. Besides, we are considering the absorption from a possibly diseased portion of the lung in which it is quite probable that any such supposed metabolic function would be at least diminished and possibly altered. Ballon [3] and others have observed, by repeated roentgen-ray examinations in those cases in which they were dealing with dilated bronchi or other pathologic lesions, especially cavities, that the oil resisted absorption longer than in cases in which pulmonary disease was absent. Moreover, if the alveolus is even partially filled with lipiodol, the supply of oxygen must certainly be diminished; and as oxygenation is the basis of their explanation of the process, this function must surely be interfered with and at any rate slowed. Therefore, because of the mildness of the cases of iodism reported in the literature, their rarity and the slow rate of absorption through the lung, which becomes more marked the greater the extent of the disease process, we believe that the danger of iodism is not of great importance unless the iodine tolerance of the individual is abnormally low.

However, by one process or another, some at least of the lipiodol is absorbed and is eliminated, mainly in the urine. After an intratracheal injection of 20 cc. of lipiodol, the daily elimination of iodine during the first two weeks is about 0.02 Gm. (Forestier). It is nevertheless important to remember that the elimination from the lung does not proceed at a fixed rate in all cases. In this respect we have noted cases in which the lipiodol shadow by roentgen ray showed up to fifteen months, though in the majority of cases the shadows persist for only a few weeks.

DANGERS INCIDENT TO TECHNIC OF INTRODUCTION

There are several methods of injecting the oil into the pulmonary tree; it may be done by the transthoracic, transglottic, infraglottic or intercricothyroid, the deglutition and the bronchoscopic routes. Dangers exist in them all, taken as a group or taken separately. The first is necessarily limited in its field of application, since it presupposes a fistula through which the oil is introduced. In the second, a tube is introduced through the mouth into the upper part of the trachea and the oil is injected through it. In the procedure of injection by the intercricothyroid route, the oil is injected through a needle directly into the trachea through the neck. The deglutition method requires the least instrumentation, the oil being allowed to flow by gravity, along the posterior pharyngeal wall and into the trachea. The bronchoscopic method consists of the usual introduction of a bronchoscope, through which the oil is then injected directly into the trachea or larger bronchi.

Practically all methods involve the use of some anesthetic, either local or general, and thus the risk of the anesthesia itself must be borne in mind. If the oil is injected through a bronchoscope, the dangers of bronchoscopy are added, as well as the extra strain on the patient of this procedure itself, which, in debilitated cases, becomes a particularly important consideration. The injection by the intercricothyroid route, with the use of syringe and needle, carries with it the risk of local sepsis, a false passage, and laryngeal edema.[8] Armand-Delille [9] especially emphasized the ease with which one may entirely miss the trachea and inject the peritracheal tissues in children. And Boidin [10] reported a case of acute edema of the larynx. The deglutition method is perhaps the safest, but its field of application is partially restricted by manipulative difficulties and the need of complete cooperation on the part of the patient. Here, moreover, there is the possibility of considerable quantities of the oil reaching the stomach.

In our own series of cases the injection has been made in nearly all by the bronchoscopic method, and they have all been done by Dr. David Ballon of the Department of Otolaryngology in the Royal Victoria Hospital, to whose skilful help we are indebted. We agree with the attitude he has adopted that at least the first injection of the oil should be done by the bronchoscopic method, for the reason that this is the only method which can yield a satisfactory and direct visual examination of the injected field. The reader is referred to Dr. Ballon's papers for a full statement in this respect. Later injections may very well be done by the indirect transglottic method, aided by proper posturing. The results of this method have been satisfactory when combined with the information afforded by the first bronchoscopic examination.

INFLUENCE OF COUGH

Most observers [11] have noted that patients have a tendency to cough during and following an injection

6. Luger: Wien. klin. Wchnschr., 1925, No. 5, p. 157. Landau: Klin. Wchnschr. **32**, 1925.
7. Roger, C. H., and Binet, L.: Recherches sur la physiologie du poumon, Rev. d. méd. **42**: 1, 1925.
8. Ballon (footnote 3). Guy, J., and Elder, H. C.: Radiographic Exploration of the Broncho-Pulmonary System by Means of Lipiodol, Edinburgh M. J. **33**: 269 (May) 1926.
9. Armand-Delille, P. F.; Duhamel, G., and Marty, P.: Le diagnostic de la dilatation bronchique chez l'enfant au moyen du lipiodol, Presse méd. **39**: 421 (May 14) 1924.
10. Boidin, cited by Guy and Elder (footnote 8).
11. Landau (footnote 6). Maclaire, A. S.: Lipiodol in Neurosurgery, Am. J. M. Sc. **170**: 874-880 (Dec.) 1925.

of lipiodol. This cough may drive the liquid out into the trachea and mouth, or may cause a splashing effect whereby the oil is thrown from one lobe to another and across the bifurcation to the other side, or from base to apex.[12] Ameuille saw this happening under the screen. Ballon concluded from studies of the act of coughing that during a spasm of coughing the lipiodol or infected material could be projected from the lower lobes and disseminated throughout the entire lung even to the apexes. Reinberg, also noting this spreading action of cough, states that "these observations are important to appreciate in the knowledge of bronchogenic metastatic affections in suppurative conditions, cancer, tuberculosis, and so forth."

It is obvious that one introduces a real foreign body into the tracheobronchial tree when one injects lipiodol.[13] The mechanisms involved in the removal of such a foreign body are several; chiefly, of course, the cough reflex, then the action of the cilia, and finally actual peristaltic movements[14] of the tracheobronchial tree. These may all be abolished temporarily by anesthesia, thus allowing easier penetration of the oil. However, cough reflexes have not been noted in ramifications finer than bronchi of the second order. This fact explains in part the observation that some of the oil remains in the lung—it has penetrated beyond the zone where it produces a cough reflex. Another factor is that in diseased bronchi one must expect diminution or absence of peristalsis, of ciliary action and of cough reflexes, whereby the retention of the oil is still further aided.

The actual depth and range of penetration of the oil depend on the foregoing factors, on the position of the patient, on gravity, on the patency of the particular bronchus concerned, and on the cough itself. We have demonstrated, in experiments as yet unpublished, that this is more extensive when there is a block to the exit of the oil in the larger bronchi or the trachea. Such a block may readily occur as the result of a plug of tenacious mucus or a reflex spasm of the glottis, whence the question arises whether or not, in a particular case, one should take the risk of spreading a disease process by cough which one knows the examination with lipiodol is likely to induce.

MECHANICAL OBSTRUCTION TO ALVEOLAR RESPIRATION

It has been stated[15] that the normal tracheobronchial tree can hold 5,000 cc. of air, and that therefore the 40 cc. of lipiodol which may be injected is in comparison an infinitely small amount, so small as to be without real danger.

We wish to draw attention, however, to the fact that in pathologic cases it is not unusual for this capacity to be diminished by as much as 50 per cent. Moreover, the injected oil does not merely prevent aeration of that portion of the alveolar surface with which it is in immediate contact; it may also act as a plug and thus prevent air from entering a considerable area of pulmonary tissue in that portion of the tree beyond the block. With diffusely scattered plugs, no mean portion of the lung may be deprived of its normal function. Moreover, since the lipiodol is known to float on top of sputum and since it may block a smaller bronchus, the potential danger exists that it may by itself act as an effective plug, preventing the physiologic removal of infective material already present in the deeper ramifications of the bronchus in question. This plugging action is naturally greatest when the oil comes to rest in an area where the cough reflex is diminished or absent. Farther on, we report cases from the literature and of our own illustrating this possibility. It is obvious that this must be considered before subjecting persons with widespread pulmonary involvement to this possibility of respiratory embarrassment or retention of toxic material.

DANGERS OF ITS ASSUMED THERAPEUTIC ACTION

The hope has been expressed[16] that a beneficial therapeutic action may be expected to follow the intrabronchial injection of lipiodol. This action is believed to be due to the local iodine effect, and encouraging results, consisting in a decrease in the quantity of sputum over a period of several weeks or even months, have been noted in cases of bronchiectasis and lung cavitation, although case reports have not been presented.

At present, a certain proportion of the injections of lipiodol are carried out on tuberculous patients. Now, although iodine in one form or another has been given for many years for various types of tuberculosis, especially surgical tuberculosis, and with apparent good effect, it has also been pointed out[17] that harm has been done by its administration. And particularly in pulmonary tuberculosis are we warned against the congestive action of iodine.[18] Iodine is recognized as a stimulant to the tubercle, somewhat similar in action to tuberculin, and it is said that it may cause a lighting up of a quiescent tuberculous process or an exacerbation of a slow-going infection. Moreover, iodine produces a congestion of respiratory mucous membrane. Lord[19] states that "the internal administration of iodides may cause toxic symptoms, spoken of as iodism and most often manifested as a catarrh of the upper parts of the tract, but at times with involvement of the lower passages and bronchi." Consequently, the possible danger, however slight, of adding an acute congestive condition to the already existing pathologic process should be remembered. At least, it would be a good precaution to determine the iodine tolerance of the patient before the administration of an iodized oil. Nevertheless, one may be allowed to think that in properly regulated doses it may be of benefit in the same manner as in graded doses of tuberculin. But it is clearly impossible to regulate the dose, for, as pointed out above, it is always problematic how much of the iodized oil given is retained by the lungs; what the rate of absorption is from the particular locality in which the oil comes to rest; over how long a period absorption may occur in the individual case; how much is coughed up and expectorated, and what portion of it is swallowed. Thus, it would seem to be practically impossible to administer iodine in a scientific manner by the intrabronchial route for therapeutic purposes.[20]

12. Reinberg, S. A.: Roentgen-Ray Studies on the Physiology and Pathology of the Tracheobronchial Tree, Brit. J. Radiol. **30**: 451-456 (Dec.) 1925. Ameuille: Injection transparietale de lipiodol dans une caverne pulmonaire; production sous l'écrane du phénomène de l'embolie bronchique, Bull. et mém. Soc. méd. d. hôp. de Paris **48**: 791, 1924. Ballon (footnote 8).

13. Maclaire (footnote 11). Singer, J. J., and Graham, E. A.: Roentgen-Ray Study of Bronchiectasis, Am. J. Roentgenol. **15**: 54 (Jan.) 1926.

14. Lemon, W. S.: Aspiration—Experimental Study, Arch. Surg., part 2, **12**: 187 (Jan.) 1926.

15. Sergent, Emile; and Cottenot, P.: Ce que la clinique peut demander aux injections intratracheales de lipiodol dans le radiodiognostic des affections de l'appareil réspiratoire: difficultes et erreurs d'interpretation, Presse méd. **33**: 500 (April 18) 1925.

16. Forestier (footnote 3). Møller and von Magnus (footnote 3).

17. Sergent and Cottenot (footnote 15). Osborne, O. T., and Fishbein, Morris: Handbook of Therapy, Chicago, American Medical Association, 1920, pp. 203-204.

18. Armand-Delille and Moncrieff (footnote 3).

19. Lord, F. T.: Diseases of the Bronchi, Lungs and Pleura, ed. 2, 1925, p. 87.

20. Forestier (footnote 2). Luger (footnote 6). Landau (footnote 7).

DANGERS

The potential dangers of the administration of an iodized oil (lipiodol) into the tracheobronchial tree from the time its administration is begun until its final complete elimination from the body may be tabulated thus:

I. Administration: It has been pointed out that each method of administration has, besides its respective manipulative and technical difficulties, certain potential dangers:

(*a*) The danger accompanying the anesthetic used, whether local or general.

(*b*) The possibility of local sepsis, laryngeal edema or a false passage, in such a method as the intercricothyroid route.

(*c*) The dangers accompanying any bronchoscopic examination when such a procedure is the method employed.

(*d*) The possibility of large quantities of oil reaching the stomach, especially in the deglutition method.

II. The Transport of Infective Material from the Mouth or Larynx by the Oil into the Lung Alveoli: This danger is more obvious, though probably rare. But if such infective material is carried in we believe that an antiseptic action cannot be expected from lipiodol.

III. Cough: The introduction of lipiodol—a foreign substance—into the tracheobronchial tree generally excites cough both at the time of its administration and after it has reached the bronchi of the second order. This cough may in turn:

(*a*) Be the means of activating the pathologic process already present in the lungs.

(*b*) Bring about the spread of the lipiodol carrying with it infected material into healthy alveoli, and so cause the rapid development of a bronchopneumonia.

IV. Mechanical Factors: Acting as a foreign substance in the lungs the oil may:

(*a*) Produce cough (vide supra).

(*b*) Bring about a degree of reduction of the vital capacity by its action as a plug, sufficient to produce more or less respiratory embarrassment.

(*c*) By this plugging action, and because it floats, cause the retention and possible absorption of purulent secretions both in dilated bronchi and in alveoli.

(*d*) Through stasis in that portion of the bronchial tree distal to the block, prepare that ground for the development of a fresh infective process.

V. Drug Factor: Since it is impossible to regulate the dosage of iodine administered by the intrabronchial route, either as to amount or rapidity and duration of absorption, such a procedure is not only irrational on the basis of scientific therapeusis but:

(*a*) Subjects the patients to the possibility of iodism.

(*b*) In tuberculous patients may actually bring about a sensitization effect with activation of quiescent disease.

(*c*) Allow the possibility of adding an acute process of the respiratory tract to the already present pathologic process, either from iodism or from the usual congestive action of iodine, or from the projection of infected sputum through coughing into healthy portions of lung.

REPORTS FROM THE LITERATURE

Having enumerated the possible complications which might occur after the intratracheal injection, it is only fair to state that, while examples of many of these potential dangers are mentioned or warned against by other authors, some of them are presented on hypothetic or experimental grounds, and clinical proof is not given. Besides, as previously stated, the general tone of the literature has been most favorable, though it is to be noted that more recently articles have appeared citing cases in which some complication has arisen, or warning against the use of the oil in certain types of cases.

Thus, considering the dangers in the order in which they are tabulated, we find that following injection by the intercricothyroid method Leroux and Bouchet[21] report a fatal case due to local sepsis developing into a phlegmon of the neck. The possibility of missing the trachea and injecting the peritracheal tissues is mentioned by Armand-Delille,[9] who especially emphasized the ease with which this may occur in children. Boidin[10] has reported a case of acute edema of the larynx, and James[22] a case of alarming respiratory difficulty developing within one hour after injection, as a result of infiltration of the tissues below the arytenoids. Ballon[8] and Guy and Elder[8] mention these complications, and the latter also state that hemoptysis, temporary pain, hoarseness and dysphagia are fairly common sequelae of this method. Forestier[3] states that after this method he has observed one case of edema of the epiglottis following an accidental injection into the cellular tissue of the neck; that there may be a little expectoration of blood coming from the wound, which he considers not important, and that at the site of the needle puncture a small superficial abscess may occur or there may be a transitory subcutaneous emphysema. Moncrieff[23] reports one case in which symptoms suggesting asphyxia occurred, but in which the pulse remained normal and the child recovered. One fatal case is reported by Ballon[8] in which be believed the cause of death to be an acute dilatation of the heart. This accident occurred in the medical service of the Royal Victoria Hospital, the injection being carried out by Dr. Ballon according to the bronchoscopic method. The patient was acutely ill at the time of the examination, and died without warning before the procedure was completed. Necropsy showed an acute pneumonic phthisis in one lung and an unresolved pneumonia in the other, but did not reveal a primary cause of sudden death. The question therefore arises here as to whether the bronchoscope itself did not initiate a pulmonary reflex of the unexplained type which is known to be a cause of sudden death. Cocaine poisoning was also considered possible.

Of actual pulmonary complications, Lenk and Haslinger[24] noted a so-called foreign body pneumonia in a case in which lipiodol had been injected for bronchography and had "remained too long." The development of a lobular pneumonia, occurring twelve hours after injection in a case of stationary tuberculosis in which 4 cc. of lipiodol was introduced intratracheally for bronchography, is reported by Lichtwitz.[25] However, in neither of these cases was the end-result noted.

Quite recently a fatality occurred following lipiodol injection in the medical service of the Royal Victoria Hospital:

H. D., a man, aged 36, in the service of Dr. Mason, was admitted with a general low grade sepsis, chronic bronchitis with cavitation, general glandular enlargement, a dermatitis multiformis and an infective process of the upper respiratory tract and mouth which was considered to be the primary focus of the general infection. All of this had cleared up markedly during the six weeks in the hospital previous to the lipiodol injection. At that time the temperature, pulse and respiration, which had varied, respectively, from 98.4 to 104 F., 120 to 76, and 35 to 20, were 99.4 F., 104 and 22. The injection performed by Dr. Ballon by the transglottic method consisted in the introduction of 15 cc. of lipiodol without difficulty, followed by another 15 cc. of the oil, which provoked slight coughing. The subsequent roentgenograms showed bronchiectatic dilatations in the left lower lobe. They showed also a

21. Leroux, L., and Bouchet, M.: Sur les accidents des injections intratracheales methode inter-crico-thyroidienne, Bull. et mém. Soc. franç. de laryngol., October, 1925.

22. James, V. M.: Personal communication to the authors.

23. Moncrieff, A. M. B.: The Use of Lipiodol in the Diagnosis of Bronchiectasis, Brit. M. J. **2**: 7 (July 5) 1924.

24. Lenk and Haslinger: Röntgenuntersuchungen an normalen und kranken Bronchien nach Füllung mit Lipiodol, Klin. Wchnschr. **4**: 1533 (Aug. 6) 1925.

25. Lichtwitz, O.: Wien. klin. Wchnschr. **39**: 121-148 (Jan. 28) 1926.

considerable filling of the normal left upper lobe by the oil, presumably forced there by cough. Within twenty-four hours after the lipiodol injection, the temperature had risen to 103.8 F., the pulse to 140, and the respirations to 30. The following day the temperature reached 104.1, the pulse 145 and the respirations 32, and there was evidence of extension upward of the area of loud breath sounds, with loud crackles in the lower left lung. The note on the following day states that the pneumonic process in the left lower lung was progressing to the upper part of that lung. The next day, five days after the administration of the oil, the patient died. The anatomic diagnosis from the autopsy report was: lobar pneumonia, left; pulmonary tuberculosis, right apex, with cavitation; fibrinous pleurisy, bilateral.

In other words, this was a case of subacute sepsis involving the respiratory tract, in which the administration of lipiodol provoked an acute pneumonic process from which the patient died, again illustrating the danger of spreading an infection by means of the introduction of iodized oil into the tracheobronchial tree.

The possibility and occasional occurrence of iodism has been noted. Landau [4] warns against this danger, while Boidin [10] urges the precaution of first estimating the iodine tolerance of the patient, although Møller and von Magnus [3] have noted only very mild manifestations of this complication. Lorey,[26] in a series of twelve injections, observed only one case of iodism, which presented symptoms for two days. However, Luger [6] reports one case and Landau [6] two cases of mild iodism following lipiodol injection for bronchography in which some of the oil went into the stomach. Forestier [3] states that this iodism is transitory and that it occurs after the injection of large doses when an important part of the lipiodol has been swallowed.

Others have warned against the intratracheal injection of lipiodol in certain conditions. Thus, Sergent [27] advises against its use in tuberculous cases showing hemorrhage or congestive attacks, or in suppurative bronchorrhea with fever. Forestier [3] gives as contraindications: (*a*) hemoptysis, in which he advises waiting a few days after its termination before making an injection; (*b*) febrile tuberculous patients, and (*c*) cases of anaerobic infection of the respiratory tract or pulmonary gangrene, in which the intercricothyroid method should be avoided. Armand-Delille and Moncrieff [3] state that patients with frank tuberculosis should not be submitted to this method because of the danger of the congestive action of iodine. Iglauer [28] does not believe that the procedure is contraindicated in tuberculosis, but warns against its use in hyperpyrexia and cachexia. Landau [4] finds the method satisfactory but says that the question of iodism and resorption is left to the future to decide. And Sicard [27] fears unnamed complications if doses of more than 40 cc. of lipiodol are injected. Forestier [3] also mentions that other observers have noticed a rise in temperature of 1 degree following the injection, but he believes that this occurs more often in consumptive patients, while Møller and von Magnus,[3] in a series of twenty-three cases, note no unfavorable reactions "in most cases," and in an isolated case a rise in temperature to 38 C. Grady [29] concludes that the possibility of harm from this procedure is slight but cannot be dismissed from consideration. Singer and Graham [13] advise against the use of lipiodol in cases of bronchiectasis as it is apt to cause foreign body complications, such as local inflammatory reactions, retention of infectious material, or mechanical reduction of the vital capacity.

26. Lorey: The Value of Contrast Mediums in the Bronchi for the Demonstration of Bronchiectasis, Fortschr. a. d. Geb. d. Roentgenstrahlen **33**: 58, 1925.

27. In discussion on Giraud and de Reynier: Exploration du poumon comprimé par la methode de Foralanini au moyen d'injections intratracheales d'huile iodée, Bull. et mém. Soc. méd. d. hôp. de Paris **48**: 1598 (Nov. 21) 1924.

28. Iglauer, Samuel: Use of Injected Iodized Oil in the Roentgen-Ray Diagnosis of Laryngeal, Tracheal and Bronchopulmonary Conditions, J. A. M. A. **86**: 1879 (June 19) 1926.

29. Grady, H. W.: The Demonstration of the Bronchial Tree by the Intratracheal Injections of Lipiodol, Am. J. Roentgenol. **15**: 65 (Jan.) 1926.

REORT OF ADDITIONAL CASES

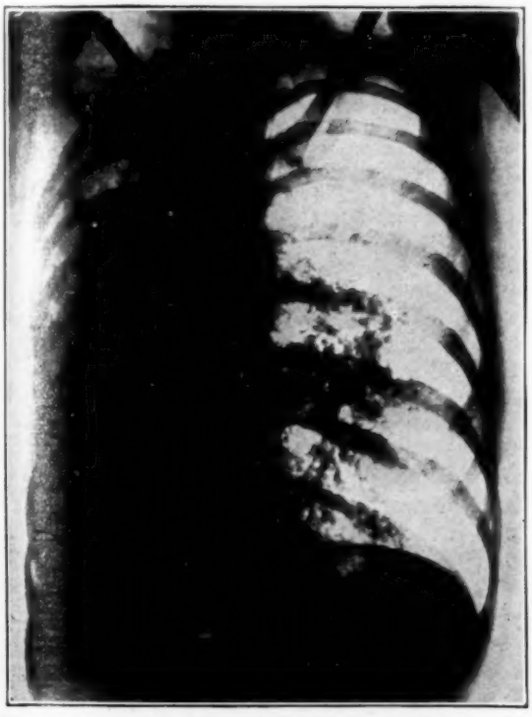
The following cases further demonstrate clinically some of the possible dangers of lipiodol:

CASE 1.—Mrs. D. S., aged 27, was first definitely diagnosed as having tuberculosis, Aug. 25, 1924. The following two years were spent in rest cures at various sanatoriums and at home, where she did light work. This was followed by a six months' sojourn at Greenwood Mountain Sanatorium, Portland, Maine, from which institution she was admitted, March 10, 1926, to the Royal Victoria Hospital as a possible case for thoracic surgery. Her temperature at Greenwood ranged from 99 to 100 F. She was found on examination to be pale and slightly emaciated, though able to walk about the ward, and she did not show cyanosis. The temperature was 98.6 F.; the pulse, 86; respirations, 20; there was 3 ounces of sputum daily, which was positive for tubercle bacilli. Clinically there was evidence of bilateral pulmonary tuberculosis. In the right lung the disease was old, with much fibrosis, adhesions and bronchiectatic small cavities. There was a suggestion of more recent and probably active infection at the hilum of the left lung, which was otherwise essentially free from disease. The cardiovascular, neuromuscular and genitourinary systems were essentially normal. The day after admission, March 11, a lipiodol injection by the bronchoscopic method, with 20 cc. of the oil, was performed by Dr. Ballon. Bronchiectasis of the right lung was noted by Dr. Ballon, and a considerable quantity of tenacious mucopus, blood stained and without odor, was aspirated, which on smear showed numerous tubercle bacilli. The patient coughed considerably after the injection. The temperature began to rise immediately after the injection, and by the following day had reached 103 F., with respirations raised to 25 and a pulse of 124. On the following days the temperature ranged between 99 and 103 with a slight downward tendency, and March 17, a dull area was noted at the left base. On auscultation the voice and breath sounds were diminished here. A few moist râles were heard in front at the apex and posteriorly just above the angle of the scapula. An impaired percussion note was not obtained here. The patient had come to the hospital with thoracoplasty in view. Her good lung, the left, was clearly too uncertain for that. Nevertheless, it was considered that her condition warranted a phrenicotomy, so that an exeresis of the right phrenic nerve was done on the following day. After this her condition remained the same as regards temperature, pulse and respiration range, although she became continually weaker. The area of dulness at the left base became more pronounced; breathing was more rapid and labored, and the sputum was slightly blood-tinged. March 23, the diagnosis of pneumonia at the left base was confirmed, and the following day the patient died. The anatomic observations at autopsy were: tuberculosis (ulcerative and fibroid) with cavity formation in the right lung; recent tuberculous bronchopneumonia in the left lower lobe; recent right phrenicotomy; cloudy, swelling of the kidneys; productive pleurisy—hydrothorax in the left pleura.

This case is presented to show that although in this particular instance death cannot be positively ascribed to the injection of lipiodol, nevertheless this was the immediate cause of a severe reaction on the part of the individual, as shown by the early and sustained rise in pulse, respiration and temperature, along with the increase in the physical signs noted. Two other points are of importance; first, that this reaction occurred in a patient with an already present subacute pulmonary process, and, second, that the patient was observed to cough considerably following the injection, which was probably the means of spreading infection

already present into healthy or slightly involved fields. Moreover, the examination of the roentgenogram taken about half an hour after the injection, reproduced in the accompanying illustration, is of interest. From our point of view it shows the marked degree of fibrosis of the right lung, and hence an important decrease in the vital capacity of the patient, which function is in all probability further impaired by the widespread infiltration of the left lung with the lipiodol acting, as suggested above, as innumerable plugs of the smaller bronchioles.

CASE 2.—Miss B. L., aged 28, suffering from pulmonary tuberculosis, had received sanatorium treatment since 1918, and her condition had remained stationary for several years. She was admitted to the Royal Victoria Hospital, Oct. 30, 1925, with chronic cough and expectoration (5 ounces daily). The temperature was from 98 to 99 F.; the respirations, from 20 to 24, and the pulse from 85 to 100. Clinically, the patient showed evidence of chronic, right sided, ulcerative tuberculosis.



Marked fibrosis of right lung and widespread infiltration of left lung after injection of lipiodol.

One week after admission, Dr. Ballon introduced lipiodol by the bronchoscopic method. This was followed by marked discomfort and increased cough throughout the rest of the day. Reexamination by Dr. Byers the day after this aggravation of the previous lesions by the injection showed marked increase of moist râles, and also numerous dry sonorous and sibilant râles throughout the previously uninvolved left lung area. There was plain evidence of bronchial irritation, and the symptoms of dyspnea, cough and expectoration were increased. By the following day the temperature had risen to 101.6 F., with a pulse of 125 and respirations of 25. This exacerbation slowly subsided, so that seven days after the onset the patient's clinical condition and the physical observations were practically the same as before the oil was injected.

This case is an example of the potential danger of a severe febrile reaction following the injection of lipiodol in a clinically quiescent case of tuberculosis.

SUMMARY AND CONCLUSIONS

1. There are definite potential dangers accompanying the intratracheal injection of iodized oil.

2. Complications reported in the literature which have occurred through the intratracheal use of iodized oil have led to the formulation by various authors of general contraindications to its use.

3. Three instances of complications occurring after the use of iodized oil, one of which ended fatally, show the potential danger of this method in cases of tuberculosis and infections of the upper respiratory tract.

4. The conclusion is therefore reached that the introduction of iodized oil into the tracheobronchial system carries with it a certain definite degree of danger from various sources, which should be weighed before patients are subjected to its indiscriminate use.

ULTRAVIOLET RADIATION AND ITS TRANSMISSION BY VARIOUS SUBSTANCES *

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The range of so-called radiant energy is very broad, extending from radiations having waves which are miles in length, on through radio frequencies, infra-red (popularly called heat), visible, ultraviolet, roentgen and gamma rays until the cosmic rays recently discovered by Millikan are reached. The wave lengths of radiation, other than in the case of electric waves, are generally recorded either in terms of the angstrom unit or in millimicrons. An angstrom unit is one ten-millionth part of a millimeter. The millimicron, mμ, is ten times larger than the angstrom unit, A., and the micron, μ, is 10,000 times greater. In table 1 are given the approximate limits of various spectral regions.

TABLE 1.—*Approximate Limits of Various Regions of Radiant Energy*

	Angstrom Unit		
Gamma rays from radium	0	to	0.1
Roentgen ray or roentgen radiation	0.1	to	500
Extreme ultraviolet radiation	0	to	2,000
Middle ultraviolet radiation	2,000	to	3,000
Near ultraviolet radiation	3,000	to	4,000
Visible radiation	4,000	to	7,800
Infra-red radiation	7,800	to	5,000,000
Electric waves, wireless telegraphy, radio, etc.	5,000,000	to	miles

The various wave lengths of radiant energy are due to vibrations or oscillations of matter in the molar, molecular, atomic or electronic states. Electric waves are due to molar vibrations, infra-red radiations to disturbances in molecules and atoms, and visible and ultraviolet radiations on through to roentgen rays and gamma radiation to the electrons. The atoms are sending-stations which broadcast their energy when the electrons in the atoms are made active by various means, such as heat, electrical excitation, or chemical action. The atoms of the ninety-two elements are built up of protons (positively charged particles) and electrons (or negatively charged particles); apparently, they differ in the number and arrangement of revolving or oscillating electrons. As a result, the character of the radiation from one element differs from that of any other element: this forms the basis of spectrum analysis.

ULTRAVIOLET RADIATION

In the gamut of solar radiation we pass from the longer infra-red waves through the visible region

* From the Section on Physics and Biophysical Research, Mayo Clinic and the Mayo Foundation.

extending from red (7,600 angstroms or 760 millimicrons) to violet (4,000 angstroms or 400 millimicrons). Below 4,000 A. is the ultraviolet, which has been divided into two portions known as "near" ultraviolet and "far" ultraviolet. Or, again, the nomenclature used is "biologic" and "lethal," depending on the action of the radiation on protoplasm, albumin and other substances and tissues of the animal organism. The ultraviolet radiation from the sun extends to a wave length of approximately 2,900 angstroms or 290 millimicrons.

The quartz mercury arc lamp emits radiations as long as 14,000 angstroms (approximately) and as short as 1,849 angstroms in an atmosphere of air. In the extreme ultraviolet regions a few centimeters of air causes definite absorption of energy. The radiation from the mercury arc lamp is of a discontinuous character and produces a line spectrum on a photographic plate, while that from the sun is continuous throughout the visible and the ultraviolet regions (with the exception of the Fraunhofer absorption lines) to the limit of the solar spectrum. Such portions of the sun's radiation as reach the earth's surface do not contain wave

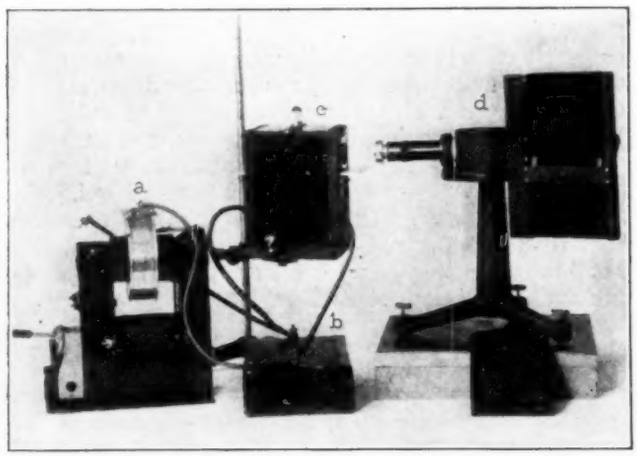

Fig. 1.—Ensemble of apparatus for producing a spark discharge in air and for photographing the spectrums in both the visible and the ultraviolet regions: *a*, transformer; *b*, condenser; *c*, spark-gap; *d*, quartz spectrograph.

lengths less than 2,900 angstroms for the reason that a part of the ultraviolet is absorbed by the cooler vapors of the photosphere, as well as by the ozone and other gases and vapors of the earth's atmosphere.[1]

TRANSMISSION OF ULTRAVIOLET RADIATION BY VARIOUS SUBSTANCES

In investigations on the transmission of ultraviolet rays by various materials, spectrographs equipped with quartz lenses and prisms must be used. Records are made on photographic plates, which may be made more sensitive to the extreme ultraviolet radiation by previous treatment of the film with oil. Visual observations may be made by observing the spectrum through a piece of uranium glass (situated in the same plane as that which would be occupied ordinarily by the photographic plate), which makes visible the otherwise invisible radiations through the phenomenon of fluorescence. Figure 1 shows a simple ensemble of apparatus which I have used for producing in air a spark discharge the spectrum of which, as photographed by the quartz spectrograph, was fairly continuous in the visible and ultraviolet regions. The materials to be tested were interposed between the spark-gap and the slit of the spectrograph. A 0.5 kilowatt transformer is used for electric excitation, together with a suitable condenser which is joined in parallel (multiple) with a spark-gap. The spark-gap consists of one electrode of aluminum and one of magesium separated by a few millimeters; this produces, when an electric discharge is passing, a spectrum which is fairly continuous to about 2,200 angstroms.

1. Dorno, Karl: Physik der Sonnen- und Himmelstrahlung Strahlentherapie, Berlin, Braunschweig, 1919. Ellis, Carleton; and Well, A. A.: The Chemical Action of Ultraviolet Rays, New York, Chemical Catalgoue Company, 1925. Hill, Leonard: Sunshine and Open Air, London, Arnold and Company, 1925.

TABLE 2.—*Transmission of Radiant Energy (Visible and Ultraviolet) of Various Wave Lengths by Vitaglass and Window Glass*

Wave Length (Angstroms)	Percentage Transmission		
	Vitaglass, Clear, 1.7 Mm. Thick	Vitaglass, Cathedral, 2.6 Mm. Thick	Ordinary Window Glass, 2.7 Mm. Thick
6,000	88	88	88
5,000	88	88	88
4,000	88	88	85
3,700	88	88	70
3,500	88	86	58
3,400	85	84	45
3,300	75	73	18
3,200	65	60	4
3,100	50	44	0
3,000	35	32	0
2,900	25	25	0
2,800	12	10	0
2,700	5	5	0

Ordinary window glass (table 2) does not transmit light of lesser wave length than approximately 3,200 angstroms; hence it fails to transmit the ultraviolet region of sunlight comprised between 3,200 and 2,900 angstroms. Recently, Lamplough of Birmingham, England, has introduced a new and fairly inexpensive glass, known as vitaglass, which transmits to the limit of sunlight in the ultraviolet region, although it does not transmit 100 per cent of each and all of these wave lengths in the ultraviolet regions, as is shown in table 2. Incidentally, there is a loss of about 12 per cent of the energy transmitted by the greater wave lengths (7,000 to 4,000 angstroms) on account of the reflection of light at the surfaces of the glass (table 2).

In the last year or two there have come on the market, for the use of poultry men in particular, various cloths treated with paraffin and wire-mesh screens filled with celluloidinous material. In general, thin, fairly porous cloth with correspondingly thin films of paraffin makes, especially when freshly prepared, a reasonably good medium for the transmission of the whole of sunlight or the outdoor sunshine, in contradistinction to indoor sunlight which has passed through ordinary window glass, and affords fairly good protection against wind and cold. When used in double layers or when they have become warmed to their melting point, and, again, often after changes which occur in the paraffin with time, such cloths are useless as transmission mediums even in the visible regions of sunlight. The heavier, more closely woven paraffin-treated cloths are, in general, absolutely useless from the standpoint of ultraviolet transmission, and also let only a fractional part of the visible rays pass through. All the wire-mesh screening materials that I have examined have transmitted the ultraviolet and visible radiations very well, being superior in these particulars to the ultraviolet transmitting glasses (such as vitaglass) now on the market. The Corning Glass Company of Corning, N. Y., is able to produce, at least for experimental purposes, glasses that transmit the ultraviolet region of sunlight

more fully than do other similar materials, but the expense is, at the present time, prohibitive except for research purposes.

All so-called cloth glasses (paraffin) or wire mesh screen glass (celluloidinous material) are, to a certain extent, fire hazards in that if once ignited they will be destroyed rapidly.

In figures 2 and 3 are presented typical spectrograms showing the ultraviolet and visible transmissions of some of the substances examined. No trade names are used; suffice it to say that some have been obtained directly from the manufacturers or wholesalers and others from local retailers. The quality of any particular product seems to run fairly uniform when selections are made at random from various lots. In taking spectrograms it should be noted that the times of exposure are of importance because incorrect conclusions can be drawn from such spectrograms if wide variations in exposure of plates are permitted. In general, for the ultraviolet region, exposures were made for ten seconds, except in the cases of the heavy paraffined

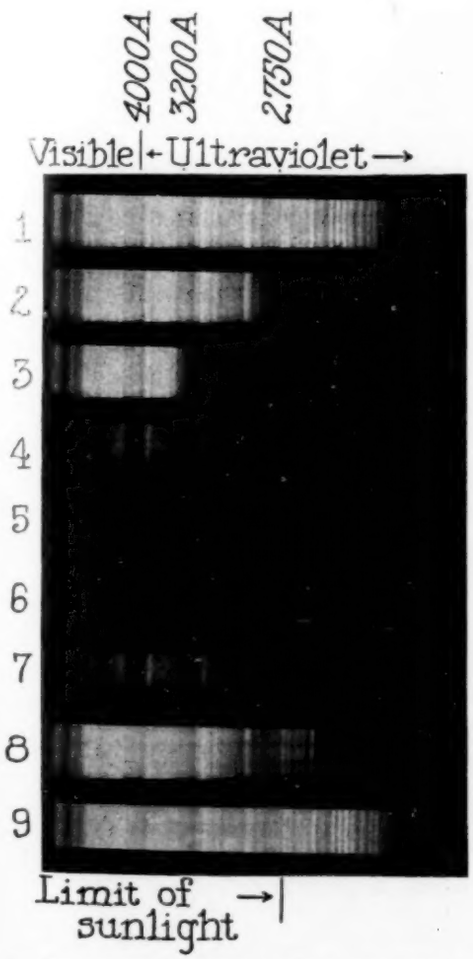

Fig. 2.—Spectrograms taken with a quartz spectrograph. The upper and lower (1 and 9) exposures were made by passing an electric discharge between metallic electrodes and allowing the light produced to pass into the spectrograph. Time of exposure, five seconds; 2, the spectrum of the energy transmitted by vitaglass, five seconds; 3, window glass, five seconds; 4, thin, loosely woven paraffined cloth, ten seconds; 5 and 6, heavy paraffined cloth, fifteen seconds; 7, another sample of thin paraffined cloth, ten seconds; 8, mesh-wire with celluloidinous material, five seconds.

cloth, when double that exposure was given. Possibly it is well to add the comment that paraffin and celluloid do not in any wise increase the transmission of ultraviolet through the cloth or through the wire mesh materials: the pores of these materials will do that far better. But the addition of sufficiently thin layers of paraffin or celluloid permits reasonably good transmission of the whole of outdoor sunlight, as well as affording protection and providing shelter. The same comment may be made with reference to various cloths coming on the market which are said to transmit "the health-giving rays of the sunshine." Granting, for the

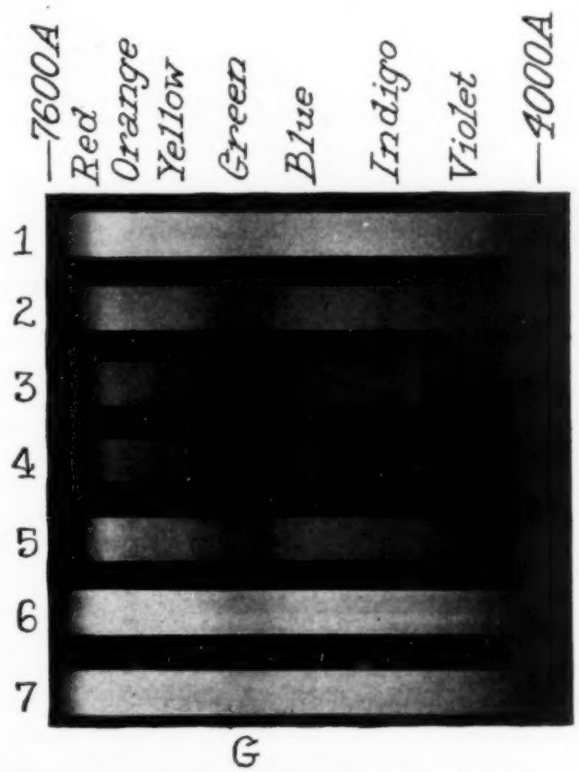

Fig. 3.—Spectrograms of transmission of various materials in the visible spectrum: 1, continuous spectrum from incandescent lamp, fifteen seconds' exposure; 2, thin, loosely woven paraffined cloth, fifteen seconds; 3 and 4, heavy paraffined cloth, thirty seconds; 5, thin paraffined cloth, fifteen seconds; 6, mesh-wire with celluloidinous material, fifteen seconds; 7, continuous spectrum of incandescent lamp. The dark areas in the spectrograms under the point marked *G* are due to lack of sensitivity of the plates used in this region of the visible spectrum.

moment, the quoted portion of the foregoing statement, it is obvious that direct exposure of the body would be the most efficacious procedure and that next best would be very thin porous materials, since the more holes there are and the larger they are the greater will be the exposure to radiation.

LIGHT-STARVATION

It seems possible that either glasses transmitting the whole of sunlight, or the cheaper substitutes in the form of thin paraffin and celluloid materials, may be used advantageously in solariums and living rooms by those who winter in northern climates and who spend, for one reason or another, the bulk of their waking hours behind glass windows.

In the summer time (July) the ultraviolet content of sunlight is at its maximal value. At that time the intensity of the ultraviolet portion of solar radiation is about equal to that of the sun's infra-red (heat) rays. In the months of December and January the ultraviolet content of sunlight reaches its lowest value, or less than 5 per cent of its maximal value in July.[2] In the summer

2. Hausmann, Walther: Grundzüge der Lichtbiologie und Lichtpathologie, Berlin, Urban and Schwarzenberg, 1923. Hill, Leonard: The Biological Action of Light, Nature **115**: 642-645, 1925. Luckiesh, Matthew; and Pacini, A. J.: Light and Health, Baltimore, Williams & Wilkins Company, 1926.

months everybody gets outdoors, each somewhat in proportion to his remoteness from the bread-and-butter line or to the impelling, on-driving forces of modern life, unless perhaps he is fortunate enough to have an outdoor job. Tanning of the skin occurs in summer by reason of the ultraviolet rays; this tanning disappears in large measure in the winter time because of a lack of both ultraviolet radiation and exposure to such as does exist. Doubtless all of the tanning and other physiologic reactions take place in accordance with the law of supply and demand. In the summer time there is a surfeit of ultraviolet radiation. All animal and plant life, to a large extent, is exposed to the outdoor sunlight for many hours each day. The plants build up the vitamins; these are probably nothing more nor less than substances with chemically activated atoms which are capable of hastening the speed of physiologic changes, so that they proceed at body temperatures and at velocities which would otherwise necessitate much higher temperatures. In the winter time there is a dearth of sunshine and of the ultraviolet rays, in particular, and civilized man wraps himself in woolens, stays indoors, and sits behind the panes of window glass which rob him of the ultraviolet of the sunshine.

LONGITUDINAL FRACTURE OF THE NECK OF THE RADIUS

AN UNUSUAL AND HITHERTO UNDESCRIBED FRACTURE: REPORT OF FIVE CASES

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AND
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It has been our unusual experience to encounter, within the brief space of three years, five cases which presented unique and identical fractures. Singularly, four cases were observed during a period of one month, and the fifth case, two and a half years later. The rarity of this condition and our failure to find similar reports after a thorough search through surgical and roentgenologic literature are the reasons for calling it to the attention of physicians.

The five cases that we observed occurred in children ranging between the ages of 6 and 10 years. In only two of these children was it possible to obtain any clear description of the nature of the trauma that occasioned the fracture, and accordingly the case records in three of the cases are incomplete, so far as they may assist in determining the mechanism by which this injury was sustained.

REPORT OF CASES

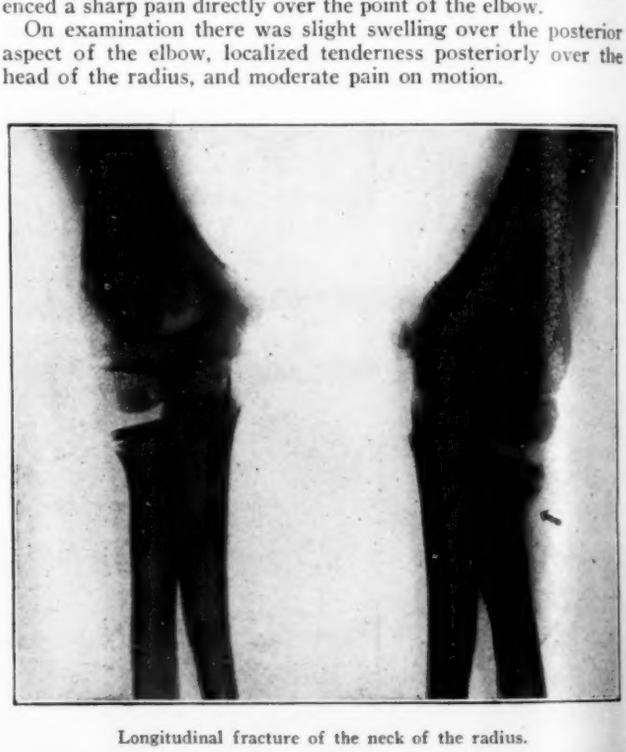
CASE 1.—M. T., a boy, aged 6½ years, fell, Sept. 24, 1923, while coming down a short flight of stairs. As he fell, his mother caught him with her hands, but did not prevent him from falling one or two steps. She did succeed in breaking the fall to a considerable extent. The boy was carrying a book under his right arm. The right elbow was in acute flexion and the forearm in moderate pronation, the book being carried in the angle of the elbow. In falling, he struck the back of his forearm in the lower third, forcing the forearm inward (extreme pronation), and at the same time the arm was forced into hyperextension, carrying it behind his back. Coincidentally with the fall, he felt a pain directly over the joint of the elbow, but the elbow did not forcibly come into contact with any object as far as the boy or his mother could observe.

On examination, there was a moderate swelling over the external posterior aspect of the elbow, with localized tenderness over the head of the right radius. There was moderate pain on flexion and extension, and slight resistance to pronation.

Roentgen-ray examination revealed a fracture involving the posterolateral corner of the proximal juxta-epiphyseal portion of the diaphysis of the right radius, the fracture entering the epiphyseal line, thus chipping off a pyramidal piece of bone measuring about one-half inch on a side. Apposition of the fragments was perfect. The fracture was treated in the Jones position, with mobilization and massage at the end of the week. At the end of one month, function was completely restored, and the elbow was painless to palpation and manipulation.

CASE 2.—R. S., a girl, aged 9½ years, tripped over a bag, Sept. 22, 1923, while walking along the street, and fell forward with her arm inwardly rotated and the forearm in acute flexion. She thinks she had her arm behind her back with the palm facing posteriorly, and in this position the arm was in extreme pronation. She struck her forearm below the elbow and experienced a sharp pain directly over the point of the elbow.

On examination there was slight swelling over the posterior aspect of the elbow, localized tenderness posteriorly over the head of the radius, and moderate pain on motion.



Longitudinal fracture of the neck of the radius.

Roentgen-ray examination revealed the identical fracture described in case 1, without displacement of the fragments.

The child was treated in the Jones position with early mobilization. The function at the end of the month was completely restored.

CASES 3, 4, and 5.—The patients presented identical injuries, but it was impossible to elicit any reliable description of the manner in which they were sustained.

The treatment in all these cases was the same as in the preceding reports, and there was no disability after the end of the month.

COMMENT

Roentgenologically, the condition presents identical characteristics in each of the five cases. The fracture can be seen only in the anteroposterior exposures and comprises a short longitudinal fracture line, extending from the epiphyseal line at the neck of the radius close to its external margin, distally to the cortex of the bone. The fracture is about one-half inch in length. The small triangular external fragment may be displaced externally very slightly, but deformity was the exception and occurred in only one case. There were no roentgen-ray indications in any of the cases of fractures or

displacements of the capital epiphysis of the radius, or of dislocations or subluxations of the radiohumeral joint.

It is difficult to explain this fracture on anatomic grounds. It is evidently a fracture by indirect violence and apparently occurs in falling forcibly in extreme pronation with the elbow flexed. It is most likely an avulsion fracture. The structure most probably concerned in the production of these fractures is a small part of the insertion of the supinator brevis, which is attached to the area of the radius to which this injury is confined.

We have attempted to find some other mechanism for the production of such an injury, but this is the only one that could conceivably produce this fracture. At first, we were inclined to feel that a ligamentous attachment to the radius might be involved. However, as this area is immediately below the orbicular ligament, which does not attach directly to the radius but simply surrounds the head of that bone, and there is no other powerful ligamentous structure in this immediate area, we cannot conceive that a ligamentous attachment is involved.

The treatment is simple support in the Jones position, and the progress is excellent with rapid union and early return of full function.

9 West Sixty-Eighth Street, 471 Park Avenue.

Clinical Notes, Suggestions and New Instruments

SPECIAL EXERCISE FOR INCREASING EXTENSIBILITY OF THE BACK

PHILIP LEWIN, M.D., CHICAGO

The exercise is presented as a valuable one to increase the extensibility of the back and the power of the abdominal muscles. It is especially recommended in that large group

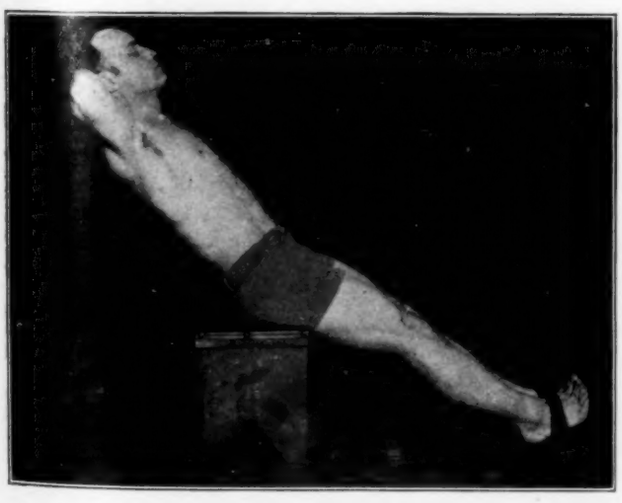


Fig. 1.—Starting position: sitting on a stool, forefeet through straps; hands behind head.

of patients with contracted muscles and ligaments in the lumbar, lumbosacral and sacro-iliac regions. It is not an easy or a beginning exercise.

The apparatus consists of a 1½ inch belt strap 15 inches long, fastened to the floor, and a small stool, 14 inches high, 11 inches wide and 18 inches long. The subject sits on the stool and the forefeet are slipped through the strap. The hands are placed behind the head. On the count of one, the trunk is allowed to hyperextend until the head touches the floor. It remains in this position during the counts of two and three, and on the count of four the return to the starting position is made. This exercise should be done from ten to twenty times each morning and night, but this number is to be attained gradually. At first a pillow or soft pad is placed on the floor to receive the head, so that the extreme position is not assumed.

Fig. 2.—Complete extensibility of back.

During extension there is a combined effect of gravity resisted by the abdominal muscles. During flexion the abdominal muscles are given much work to perform. A similar exercise described by R. Tait McKenzie, which requires more apparatus, is called the "stall bar" exercise.

104 South Michigan Avenue.

MELANO-EPITHELIOMA OF THE ESOPHAGUS *

HERMAN J. MOERSCH, M.D., AND ALBERT C. BRODERS, M.D., ROCHESTER, MINN.

Most tumors of the esophagus are of the carcinomatous type, the squamous-cell epithelioma being by far the most common. Contrary to the general opinion, carcinomas of the esophagus

Fig. 1.—Esophagus after ingestion of barium, showing filling defect due to tumor.

are highly malignant. Broders has found most of them to be graded 3 or 4.

Benign tumors of the esophagus are generally regarded as unusual. Many cases of hemangioma, fibroma and lipoma of the esophagus are reported in the literature, whereas we

* From the Division of Medicine and the Section on Surgical Pathology, Mayo Clinic.

were able to find only one account of a melano-epithelioma of the esophagus. The case was one of primary melanoma of the esophagus reported by Dr. Emil Bauer[1] of Stuttgart, Germany, in 1906. The patient died in 1896, and the melanoma was found at necropsy by Dr. Roloff in the pathologic institute in Tübingen. Prior to death the condition had been diagnosed carcinoma.

It was recently our privilege to examine such a pathologic specimen. So far as we can determine, this is the only instance in which melano-epithelioma of the esophagus has

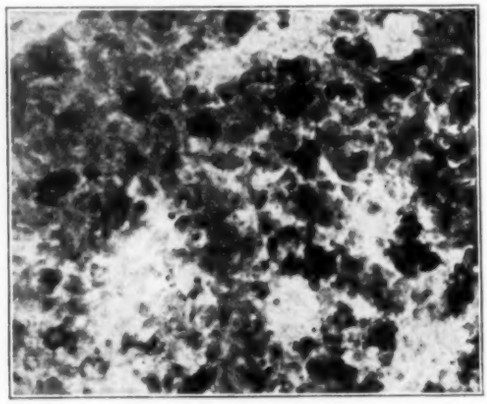


Fig. 2.—Section of tissue removed from tumor of esophagus, × 120.

been diagnosed while the patient was living; also this case is the only one reported in the English literature.

REPORT OF CASE

A man, aged 59, was referred to the Mayo Clinic, May 28, 1926, because of dysphagia. A diagnosis of a malignant growth of the esophagus had been made previously. The patient apparently had been perfectly well until about April 21, when he first noticed dysphagia and pain on deglutition. The point of obstruction and pain was located by the patient under the lower third of the sternum. The pain was relieved by the expectoration of mucus. The symptoms gradually increased until three weeks before the patient came to the

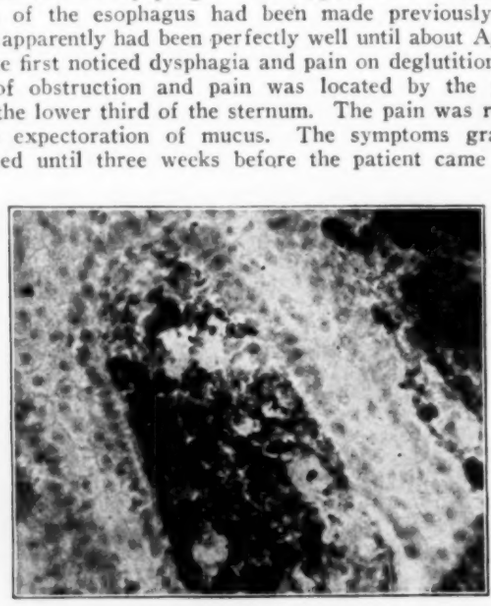


Fig. 3.—Section of tissue removed from tumor of esophagus, × 150.

clinic, at which time he experienced almost complete obstruction and regurgitated food after eating, although he could get liquids down if he took plenty of time.

In spite of the dysphagia and regurgitation, the patient appeared to be in good general condition, having lost only 8 pounds (3.6 Kg.) since the onset of the trouble. The result of the general examination was essentially negative aside from slight ptosis of the right upper lid, which the patient said had existed as long as he could recall. Roentgenologic examination revealed a lesion of the lower third of the esophagus, which was reported as benign (fig. 1). The aortic arch was also found to be slightly widened and, as the patient had been subject to attacks of grand mal, a thorough investigation was made for syphilis; the test, however, proved to be absolutely negative.

Esophagoscopy was then performed under local anesthesia, and a lesion was located in the lower third of the esophagus which involved about two thirds of the circumference of this structure. It was necrotic, appeared ulcerated, and bled rather easily. In many respects it resembled an impacted foreign body with its surrounding area of ulceration and necrosis, but it was much blacker than such an obstruction usually is. A specimen was removed for diagnosis, which grossly appeared black. The microscopic examination confirmed the diagnosis of melano-epithelioma (figs. 2 and 3).

COMMENT

Whether this condition was primary in the esophagus we are unable to say as the patient is still living, but we could not locate any evidence of a primary lesion elsewhere on or in the body. Five months after our examination the home physician informs us that the patient is failing rapidly and eats with considerable difficulty.

1. The specimen and records were discovered at the pathologic museum by Dr. Bauer (Ein Fall von primären Melanom des Oesophagus in Arbeiten auf dem Gebiete der pathologishen Anatomie und Bakteriologie, Stuttgart, 1906, p. 343).

A METHOD OF OPERATIVE PROTECTION FROM SKIN INFECTION *

W. E. JOHNSTON, M.B., DETROIT

The usual method of protecting the operative dissection from infection from the skin, by the use of skin towels and towel clamps, has practical disadvantages when applied to limb surgery. The skin towels do not surround the limb but only supplement the drapes in protecting the operative site. This covering, with the added incumbrance of the towel clamps, prevents the free manipulation of the member, so frequently required in limb surgery. To overcome this handicap, Dr. C. W. Peabody of the Henry Ford Hospital Clinic and I have developed the method here described.

Fig. 1.—Method of operative protection from skin infection by the use of collodionized stockinet, with cut margins of stockinet and skin held firmly together with Michel clips.

The limb is painted with a 5 per cent solution of iodine from the fingers or toes to well beyond the next proximal joint from the operative field. Sterile stockinet of suitable width is then rolled on the extremity, so as to cover the limb to the same level. The stockinet should be of such width as to fit the limb snugly. The stockinet covered limb is placed on a sterile sheet. The remainder of the limb, the other limb and body are draped with sheets as indicated.

Collodion is next applied to the stockinet, covering the immediate operative field in sufficient quantity to penetrate the stockinet. When the collodion has dried, the stockinet is thereby glued to the skin. The incision is made through the collodionized stockinet, the skin and subcutaneous tissue. After the bleeders are clamped and tied, the cut edges of the stockinet are clipped to the skin margins with Michel clips. The small half inch clips have been found the most efficient size to use with stockinet. The clips are placed about a half

* From the Orthopedic Division of the Henry Ford Hospital.

inch apart. Figure 1 shows this method of protection from skin infection in the exposure of the tibia for the excision of an autogenous bone graft.

The skin surface is not seen, as the collodion holds the stockinet glued to it while the incision is being made. With the added reinforcement of the Michel clips, the dissection, the operative procedure or the manipulations may be carried out with freedom without fear of exposing the skin surface. The closure is completed as far as the subcutaneous fascia before the Michel clips are removed. The skin incision is then closed after the stockinet has been separated from the skin surface.

If the operation is to be performed under local anesthesia, the infiltration of the skin and subcutaneous tissues may be carried out through the collodionized stockinet.

When the hand is the region of the operation, a cotton glove is applied and glued to the skin, at the site of operation, with collodion. The skin incision is made through the collodionized glove, and the cut edges of the glove and skin are more firmly held together by Michel clips.

Fig. 2.—Method of operative protection from skin infection by the use of skin towels with their edges held firmly to the skin margins by Michel clips.

In operative procedures in the region of the hip and shoulders, the limb is covered with sterile stockinet up to the site of the operation. The skin in the immediate operative field is covered by skin towels, which have their margins clipped to the cut skin margins by Michel clips, either the small size (one-half inch) or the medium size (five-eighths inch). Figure 2 shows this method of protection from skin infection in the exposure of the hip by the Smith-Peterson approach.

The advantages of this method of skin protection are many. The use of collodion to glue the stockinet to the skin of the operative site permits the incision to be made with absolute protection from infection of the wound from the skin surface. The collodion makes the stockinet impervious to infection from the skin in the immediate operative field. The Michel clips, on account of their light weight and small size, do not interfere in the local approach to the operative field. With the limb covered with stockinet and Michel clips used at the cut skin margins, instead of towel clamps, the operator is able to carry out any manipulation of the limb with absolute freedom.

Prognosis in Practice.—Prognosis, rightly understood, is not merely a question of telling whether a patient will survive or not—"immediate" prognosis, as it is called. It is much wider than that. It should include the consideration of how long life is likely to be prolonged, and, in the event of a fatal issue, the mode of death, or, if recovery is anticipated, when it will take place, whether it will be complete, at what period the patient will be fit for work, and so forth, all of which considerations may be grouped under the term "remote" prognosis. It includes, in short, a complete foreknowledge of the whole course of events. In practice one has to form a prognosis in three sets of circumstances, each governed by different conditions: (1) where the question of the expectation of life or health arises in persons presumably healthy; (2) in acute self-limited disease; (3) in chronic disease, whether curable or inevitably progressive.—Hutchison, Robert: Purvis Oration on Prognosis, *Lancet*, Jan. 1, 1927.

Special Article

THE FREQUENCY OF BOTULISM

REPORT OF OUTBREAKS FOR 1926

In a report [1] on outbreaks of botulism from 1922 to 1926, published last year, the data were thus summarized:

There have been reported in the United States and Canada from 1899 to date, and including one outbreak from England, 147 outbreaks, or a total of 504 cases with 337 deaths, giving a case mortality of 67 per cent; fifty-four outbreaks have been proved toxicologically and bacteriologically. If there is taken an eight-year period, from 1918 to 1925 inclusive, an average of approximately thirteen outbreaks has occurred annually.

The accompanying table includes all proved and clinically probable outbreaks of botulism that have occurred in 1926.

Cases of Botulism Reported in 1926

Causative Food	Method of Preparation	Persons Ill	Deaths	Location	Type Demonstrated	Comment
String beans	Home canned	2	1	Powell, Wyo.	No laboratory examination	No evident spoilage or bad odor
Trout or salmon	Home canned	3	1	Roberts, Ore.	Negative	Clinically, report indicated botulism; Oregon Bd. of Health considers diagnosis of botulism as doubtful
Asparagus	Home canned	1	1	Lockford, Calif.	No laboratory examination	Acid taste; "off" odor; clinically, cases were botulism
String beans	Home canned	8	7	Province, Buenos Aires	Laboratory examination positive	Abstract, J.A.M.A., 88: 67 (Jan. 1) 1927

It will be noted that only four outbreaks occurred in 1926, when the expectancy average was thirteen. It is decidedly interesting to note that all outbreaks were due to home canned foods. The food involved in two outbreaks was home canned string beans, one outbreak occurring in Argentina; home canned fish and home canned asparagus were involved in the other two.

Of the outbreaks reported in the United States, all were in western states. This is in accordance with established epidemiologic facts that the distribution of the spore of *B. botulinus* in the soils of western states is wide, and the number of outbreaks of botulism may be in direct ratio to this distribution and the safety of canning methods used, particularly in the home, for fish, meat and vegetables, such as corn and string beans, and fruit, such as olives.

Two outbreaks were reported as botulism, one in Indiana and one in Colorado. The final reports from autopsy indicate the Indiana case to have been meningitis; the Colorado case was attributed to influenza.

SUMMARY

There have been reported in the United States and Canada from 1899 to 1927, and including one outbreak from England and one from Argentina, 151 outbreaks, or a total of 518 cases with 347 deaths, giving a case mortality of 67 per cent; fifty-five outbreaks have been proved toxicologically and bacteriologically.

1. The Frequency of Botulism, J. A. M. A. 86: 482 (Feb. 13) 1926.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, APRIL 23, 1927

THE EXCRETION OF STEROLS

The association by the biochemist of cholesterol with bile is one not only of name but also of fact. While the amount of this unique alcohol is small in bile, attention has been focused on it because of the fact that gallstones are usually composed more or less of cholesterol. Although definite progress has been made in the chemistry of cholesterol,[1] the metabolism of this substance has not yet been clearly defined. While the biliary cholesterol is generally considered to be an excretion, the observed relationships between blood and bile sterol have not always supported this conception. Moreover, investigations of the subsequent absorption of this cholesterol through the intestinal wall have not yielded consistently positive results. Studies of its synthesis carried out by analyzing intake in the food and output in the feces have led, in general, to the conclusion that some organ or group of organs in the body is capable of making this compound de novo. The chemical analysis and the biologic manipulations incident to the study of the general theme are admittedly difficult, and these factors, together with the pitfalls of interpretation, are reason enough for the relatively few significant investigations in this field.

Sperry and Bloor[2] of the University of Rochester have reported that a small, fairly constant quantity of lipid is excreted in the feces of dogs and cats which were either starved or were fed a lipid-free diet. The quality of the fecal lipid is surprisingly uniform, whether the animal is starved or is given food. From the reported analyses the fact stands out that, in addition to the large proportion of the fatty acids present uncombined or in the form of soaps, approximately one third of the lipid occurs as nonsaponifiable matter. Further experiments designed to elucidate the source of the fecal sterol on the fat-free diet have recently been reported by Sperry.[3] The elimination in normal control dogs was compared with that of dogs in which a fistula had been made so that none of the bile reached the intestine but passed to the outside. When such animals are fed a lipid-free ration, chemical examination of the feces should indicate whether or not the fecal sterol is excreted into the intestine in the bile or by some other pathway. It was found that the total lipid of the feces under the experimental conditions described was from one and one-half to four times greater in the dogs with a biliary fistula than in the normal control animals, but that the ratio of the sterols to total lipid was markedly constant.

These clear-cut results rule out the bile as the source of fecal sterol in the dogs with a biliary fistula when lipid is not given in the food and suggest that, so far as controls are possible in physiology, the same is true in normal animals under such conditions. Attention is thus focused on the intestinal epithelium as the site not only for absorption of the food sterols but also for the excretion of sterols having their origin in the food or synthesized in the body. Although these experiments with their significant implications will necessitate a change in point of view, the fact remains that the bile constitutes a facultative mode of exit of considerable importance for sterols, even though it may no longer be regarded as the only pathway of excretion.

1. Anderson, R. J.: J. Biol. Chem. **71**: 407 (Jan.) 1927. The Individuality of Cholesterol, editorial, J. A. M. A. **88**: 1182 (April 9) 1927.
2. Sperry, W. M., and Bloor, W. R.: J. Biol. Chem. **60**: 261 (June) 1924. Sperry, W. M.: J. Biol. Chem. **68**: 357 (May) 1926.
3. Sperry, W. H.: J. Biol. Chem. **71**: 351 (Jan.) 1927.

THE CEREBROSPINAL FLUID

The cerebrospinal fluid has been familiar to physiologists for more than a century, since it was first described in a clear-cut manner by the distinguished French scientist François Magendie, in 1825. Keen interest in the fluid and its functions was not exhibited, however, until a comparatively recent date. The current attention to the subject is in large measure due to the introduction of lumbar puncture into clinical medicine. The operation is performed ordinarily either for the purpose of relieving intracranial pressure, as in hydrocephalus, or for collecting cerebrospinal fluid for diagnostic use. According to a recent writer,[1] the established facts regarding the fluid include its origin in the choroid plexus, the perivascular spaces contributing a small additional amount. Absorption of the fluid takes place chiefly through the arachnoid villi into the venous sinuses of the skull, a small amount of fluid being absorbed along the cranial and spinal nerve trunks. There is also good evidence that the mechanism of absorption through the arachnoid villi is determined by the relative hydrostatic and osmotic pressures of the cerebrospinal fluid and the blood in the dural sinuses.

Owing to certain apparent peculiarities in the proportions of the constituents in the cerebrospinal fluid as compared with those of their antecedent source, the blood, the conclusion has been reached by various

1. Fremont-Smith, Frank: The Nature of the Cerebrospinal Fluid, Arch. Neurol. & Psychiat. **17**: 317 (March) 1927.

investigators that the fluid represents a true secretion, presumably of the choroid plexus. Thus the latter is at once put into the category of a secretory gland, like the parotid. Specific products of secretion, of the sort that such glands usually elaborate, have never been described in the case of the cerebrospinal fluid. The direct evidence for active secretion rests on the observation that certain agents introduced into the general circulation cause a real or apparent increase in the rate of formation of the fluid, which is accompanied by well defined histologic changes in the cells covering the choroid plexus. Among the agents that produce these effects are pilocarpine hydrochloride, muscarine, ether, carbon dioxide, epinephrine hydrochloride, solution of pituitary, extract of brain, and extract of choroid plexus. Morphologic changes, so characteristic of secretory activity in typical glands, have been described, but their interpretation, notably by Becht [2] of Chicago, greatly detracts from the cogency of the observations in favor of the secretory hypothesis.

The most recent student of the problem, Fremont-Smith [1] of the Harvard Medical School, has summarized the evidence for a purely physicochemical mode of production of the cerebrospinal fluid. He has not found indications that would contradict the importance of dialysis and filtration from the blood of adjacent capillaries as the active agencies in the process. The analogy between the aqueous humor of the eye and the cerebrospinal fluid in their genesis is pointed out. The two fluids are practically identical. The newer conceptions of the Donnan membrane equilibrium has helped to clear the seeming discrepancies with respect to the composition of the cerebral fluid, which is now recognized to be in osmotic equilibrium with the blood plasma. As Fremont-Smith concludes, the variations in pressure of the fluid can be accounted for by the changes that occur in capillary pressure in the choroid plexus or in osmotic pressure of the plasma. The chemical composition of the fluid, as far as all the major constituents are concerned, is exactly what would be expected from a simple membrane equilibrium, and can be reproduced outside the body by simply dialyzing plasma through a suitable collodion membrane. The laws that characterize this equilibrium hold true in many parts of the body and determine the composition of pleural, ascitic and synovial effusions, also the chloride exchange that occurs between red cells and plasma. The idea of an active secretion is accordingly being abandoned. At present the problem of kidney secretion is being subjected to an equally searching examination.[3] One may be prepared to learn in due season that the laws which determine the simple membrane equilibrium existing between the plasma and certain body fluids may have a fundamental significance for the mechanism of fluid exchange in the organism.

2. Becht, F. C.: Am. J. Physiol. **51**: 1 (Feb.) 1920.
3. Marshall, E. K., Jr.: The Secretion of Urine, Physiol. Rev. **6**: 440 (July) 1926.

THE ASSIMILATION OF IRON

The actual daily requirement for iron in the case of the human adult is at present assumed to amount to only a few milligrams of the element. From the quantitative standpoint it would appear, therefore, as though the problem of iron in nutrition should cause little concern. Perhaps this accounts for the seeming neglect of the subject until quite recently. A large part of the iron contained in the body is confined to the blood, where it courses as an integral part of the hemoglobin of the red blood corpuscles. The clinic of human disorders affords numerous illustrations of shortage of the oxygen-carrying erythrocytes; and this condition can be imitated to some extent in experimental ways for purposes of the study of anemia. For many years the latter has been interpreted as a lack of iron, a thesis substantiated by the fact that it is actually possible to induce anemia experimentally by feeding diets extremely deficient in the element. Workers [1] at the University of Wisconsin, for example, have produced anemias of dietary origin in rabbits by feeding them on cow's milk, a food so poor in iron that it contains only 0.0003 per cent of the element.

Iron therapy by no means rests on a firm foundation of established facts. Clinical experience has long indicated that dosage with salts of iron is not effective in all cases of anemia. Accordingly, the suggestion has been developed that in cases of deficiency of hemoglobin the supply of the organic accompaniments of the iron in the respiratory pigment molecule may be at times quite as important as that of the inorganic fragment. What the requisite organic nucleus actually is has been only a matter of conjecture. Recently it was pointed out [1] that the nutritional anemia induced in rabbits by a whole milk diet could not be corrected by the addition of inorganic iron (ferric oxide) but that such an anemia could be corrected when in addition to the ferric oxide there was supplied in the diet either fresh cabbage or a cold 95 per cent alcoholic extract of desiccated cabbage or an alcoholic extract of cornmeal. These extracts were practically free from iron. A chlorophyl preparation free from iron fed in the presence of added ferric oxide was also an effective supplement to a whole milk diet as a prophylactic for anemia. Lettuce is also demonstrably effective.

A renewed investigation [2] of the subject suggests that the deficiency in milk leading to nutritional anemia is of inorganic character rather than of organic nature. Nutritional anemia induced by a whole milk-ferric oxide diet can be corrected by the ash of lettuce or by the ash of cabbage. The problem has become more complicated by the indication that certain highly purified preparations of iron salt are far less potent than

1. Hart, E. B.; Steenbock, H.; Elvehjem, C. A., and Waddell, J.: Iron in Nutrition: I. Nutritional Anemia on Whole Milk Diets and the Utilization of Inorganic Iron in Hemoglobin Building, J. Biol. Chem. **65**: 67 (Aug.) 1925.
2. Hart, E. B.; Elvehjem, C. A.; Waddell, J., and Herrin, R. C.: Iron in Nutrition: IV. Nutritional Anemia on Whole Milk Diets and Its Correction with the Ash of Certain Plant and Animal Tissues or with Soluble Iron Salts, J. Biol. Chem. **72**: 299 (March) 1927.

the impurer products; so that further investigation must definitely decide whether extra inorganic factors other than iron are concerned and what the nature of such factors is. To the confusion as to whether factors other than iron itself, notably either organic complexes or certain as yet unrecognized inorganic substances, promote the production of hemoglobin, an added possibility has recently been presented in THE JOURNAL. Simmonds, Becker and McCollum[3] of the Johns Hopkins University have suggested that the newly recognized vitamin E, the so-called fertility promoting factor, is in some manner associated with iron assimilation. The Baltimore physiologists believe their evidence indicates that vitamin E is a substance specifically related to iron assimilation in a manner comparable to the relation of vitamin D to phosphorus and calcium metabolism. In the light of these unexpected correlations between the utilization of two vitamins and certain mineral elements, they add, it will be worth a careful search to find whether each of the other mineral elements has a companion substance (vitamin) which must accompany it in order that physiologic utilization may be possible.

On this basis the use of ferric citrate and a fat having the properties of wheat germ oil—a potent source of vitamin E—is suggested as a logical basis for the treatment of secondary anemias. Simmonds, Becker and McCollum even extend their conclusions to other types of disorders. Since liver is rich in iron and in the vitamin in question, there appears an explanation for the therapeutic value of liver in the treatment of pernicious anemia, as recently suggested by Minot and Murphy.[4]

Current Comment

THE FREQUENCY OF BOTULISM

Elsewhere in this issue of THE JOURNAL is a report[5] on the frequency of botulism, with a summary of outbreaks for 1926. A study of the data now available for 1926 shows a marked decrease in outbreaks. The reasons for this decrease are not clearly indicated, yet certain facts concerning commercial canning, such as scientifically obtained and controlled sterilization processes by heat, are well known and, theoretically at least, dissemination of knowledge of these facts may be assumed to have had effect. The point has often been stressed, particularly for home canners in western states who may use insufficient heat processes without considering altitude, that vegetables, meat and fish, so canned, must be boiled thoroughly before being consumed and after being removed from the can or glass jar. Perhaps the most encouraging sign in this report is the absence of any cases attributed to commercially canned food. For a number of years the commercial canning industry has realized its responsibility to the public by performing and supporting research. As a result sterilizing processes have been carefully and scientifically standardized in most foods susceptible to the growth of *Bacillus botulinus* and the production of toxin.

THE SCARLET FEVER PATENTS

The usually staid editorial columns of the *British Medical Journal* and the *Lancet* have been in the midst of an excited "viewing with alarm" that is more American than British in its anticipation of harm without investigation of the evidence. Apparently the Scarlet Fever Committee, established to control the use of the methods resulting from the discoveries of the Drs. Dick relating to scarlet fever, has thought it advisable to secure in Great Britain patents similar to those sought in this country for the protection of the manufacture and use of the methods and products. Our British contemporaries point out that the tendency toward the securing of patents covering medical discoveries is on the increase and that great harm may result from commercialization. In this issue of THE JOURNAL the Drs. Dick supply information that the writers of the editorials referred to might well have sought before unduly arousing public antipathy and stimulating ungracious newspaper publicity. Briefly, Drs. George F. and Gladys Henry Dick indicate that they sought the most competent advice before embarking on the procedure for which they are now condemned; they reveal that they have not had and will not receive compensation personally from the patents; they have sought only to prevent the manufacture and sale of unworthy or inefficacious products in order that the public might be protected against commercial exploitation. One might enter here into recriminations on the subjects of embargo and boycott and discuss the whole question of nationalism in medical science. All the great nations of the world have tried at one time or another to promote scientific research in the field of medicine for national aggrandizement. Such a discussion is, however, farthest from the purpose of this brief note. Medical science and its discoveries for the relief of human ills should know no national boundaries. Nevertheless, the intricacies of modern commercial methods make necessary some means for protecting the discoverer and the public against those who would take undue advantage of both. The Insulin Committee of Toronto, the patents on thyroxin and on the scarlet fever preparations, have been attempts to find a way in the maze of commercial promotion and deceit. Perhaps none of these methods is satisfactory. Some organization—the American Medical Association, the British Medical Association, the Medical Research Council of Great Britain, or even the Chemical Foundation—should seek a means of giving the discoverer his due, throwing the products open to fair competition in manufacture, protecting the public, and prosecuting to the utmost those who undertake to go beyond the magnificent altruism of medical tradition for their personal gain. In the meantime questioning of motives might well be withheld until sufficient facts are available to make the questioning warranted.

3. Simmonds, Nina; Becker, J. E., and McCollum, E. V.: The Relation of Vitamin E to Iron Assimilation, J. A. M. A. **88**: 1047 (April 2) 1927.

4. Minot, G. R., and Murphy, W. P.: Treatment of Pernicious Anemia by a Special Diet, J. A. M. A. **87**: 470 (Aug. 14) 1926; Boston M. & S. J. **195**: 410 (Aug. 26) 1926.

5. The Frequency of Botulism, this issue, page 1321.

Association News

THE WASHINGTON SESSION

Reception at the White House

The Local Committee of Arrangements at Washington announces a reception to Fellows and their wives by the President of the United States and Mrs. Coolidge in the South Grounds of the White House, Wednesday, May 18, at 12:30 p. m.

Reunion and Banquet of Alumni of the George Washington University Medical School

There will be a reunion and banquet of the George Washington University Medical School Alumni at the City Club, 1320 G Street, N.W., Wednesday, May 18, at 7:30 p. m. Dr. C. N. Chipman, 1420 Rhode Island Avenue, N.W., Washington, D. C., is the chairman of the Committee of Arrangements.

Scientific Exhibits: Exhibit by the Section on Dermatology and Syphilology

The Committee on Section Exhibit announces that Prof. C. L. Karrenberg of the Dermatologic Section of St. Georg's Hospital, Hamburg, Germany, will personally demonstrate an exhibit on fungi in connection with the exhibit of the Section on Dermatology and Syphilology. He will bring about 200 cultures, together with illustrations of fungi and fungus diseases as met in Europe. He has also collected specimens from other mycologists, including the Italian Pollacci. He will cover the yeasts as well as hyphomycetes; the former are occupying increasing attention today in dermatoses.

Annual A. M. A. Smoker of University of Pennsylvania

The Society of the Alumni of the Medical Department, University of Pennsylvania, will hold its Annual A. M. A. Smoker at the Racquet Club in Washington on Wednesday evening, May 18, at 9 p. m. The object of this smoker is to promote fellowship and renew acquaintances among the university alumni. Every effort is being put forth to make it a success. Speeches will be made by Dr. George E. de Schweinitz, Dr. Alfred Stengel and other distinguished alumni.

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Held in Chicago, Feb. 14, 15 and 16, 1927

(Concluded from page 1239)

FEDERATION OF STATE MEDICAL BOARDS

FEBRUARY 16—AFTERNOON

Enforcement of a Medical Practice Act

DR. T. J. CROWE, Dallas, Texas: If by the exercise of some supernatural power it were possible for us in a few months to so change the minds of men and women of average intelligence that they would recognize the value to humanity of practitioners adequately educated in the fundamental sciences, as anatomy, physiology, embryology, histology, pathology, bacteriology and chemistry, a knowledge of all of which is absolutely essential to the making of a correct diagnosis, enforcement of the practice acts—which are humanitarian measures—would cease to be a problem. In our efforts to secure favorable legislation and convictions for violation of the practice acts, we should not try to make the legislator or the court believe that all men and women who hold opinions in conflict with our own are charlatans or knaves. Some of them are honestly holding to erroneous convictions which they absorbed from environment, from honest but ignorant instructors or from mercenary imposters in whom they had confidence. Mystery and superstition are still associated with disease in the minds of a large percentage of the people of the United States. This is proved by the number of patients—intelligent as well as ignorant—who daily seek practitioners of pseudomedicine, and by the thousands who purchased worthless medical devices, advertised as mysterious cure-alls by sharks who are aware of the persistence of traditional psychology.

We are not disposed to criticize the policy of the early promoters of scientific medicine. Besides overlooking the educative value of consistent publicity, the pioneers of modern medicine made a serious mistake when they attempted to require all applicants for license to pass an examination in theory and practice, instead of providing adequate, uniform qualification tests, without questions on the use of drugs or treatment. If nondiscriminative practice acts had been generally adopted twenty years ago, they would have forestalled the further development of cults and solved the problem of enforcement.

Every attempt by law to trespass upon what is regarded as the personal right of a free citizen has met with failure. It must be obvious to reasonable minds that a law which restricts the rights or privileges of human beings cannot be effectively enforced or long survive unless its provisions are nondiscriminative and apply with equal force and effect to all citizens engaged in the same pursuit or occupation, having the same purpose and living under like conditions. The common pursuit of all medical practitioners, regardless of method employed, is the alleviation of human suffering and the cure of disease. They differ only in belief as to the causes of disease and the means that should be employed to relieve or cure an afflicted person—which is a matter of individual judgment. This being true, it is only reasonable to presume that all persons engaged in the same occupation—alleviation of suffering and cure of disease—and having the same purpose, should qualify therefor under like conditions or tests of ability. Since it is not the function or the right of the state to say what method of treatment shall be employed, which is a matter of judgment and not of law, the government should protect the public health by the adoption and maintenance of safe, nondiscriminative qualification standards, and require all applicants for license to measure up to them.

The adoption of multiple standards for the practice of medicine is the rankest kind of farce; it is equivalent to absence of standard. Almost without exception a practitioner with limited license—that is, license to practice osteopathy, homeopathy, eclecticism or chiropractic—will sooner or later make unlimited use of it. I have never known a holder of a limited license who has not overstepped the privileges of his license certificate. The privilege of selecting one's medical adviser and the method of treatment desired is a constitutional right, which the state cannot and should not attempt to deny. But it is and it should be the right of the state to prescribe the qualification on which an applicant for license to treat a sick person within its borders, and charge a fee therefor, may be authorized to do so.

Our experience with prosecutions convinced us that the court room is an important factor in the dissemination of medical education. This may be doubted by those who have had little experience with prosecutions. But when a violator is on trial, he is followed to the court room by many of his patients and friends, who get more information on the value of scientific medicine during the trial than we could get to them in ten years in any other way. It gives intelligent persons a chance to differentiate the ignorance of the accused from the intelligence of the medical witnesses on the side of the prosecution.

Violators of the practice act must be persistently prosecuted. Persistent violators are disposed to protect themselves as long as possible; first by bluffing and later by hiding behind evasive schemes. But persistent prosecution will overcome the former and render the latter so unprofitable that it cannot be long continued.

To insure their enforcement, the medical practice acts should be simple, constitutional and free from technicalities that might be overlooked in the trial of a case, and thus cause a reversal. The information and complaint form should cover every phase of the law, and be modeled after one that has stood the test of the courts. Great care must be given to the selection of witnesses for the trial of a case. We must be sure that they will appear; that they will swear to the date and the place treatments were given and the amount

of fee paid, and if possible produce receipts; all of which are necessary in order to connect up the material facts of the case. Testimonials, such as the cures some of the defendant's witnesses will attempt to attribute to the skill (?) of the defendant, should not be admitted. The law is not concerned with the result of treatment or the skill of the practitioner. What the court must determine is, Is the defendant legally registered? In the trial of violators of the practice act, much depends on the judge's charge to the jury. It is very important to know in advance the attitude of the trial judge, and whether he understands the law well enough to give a proper charge. Another useful weapon against the inveterate violator of the practice act is the civil suit for damages, when the patient has been damaged by the treatment. The prospect of becoming involved in such litigation is very depressing in its effect on those who would evade the criminal law. We have noticed that the success of medical legislation and enforcement of the practice act depends on the efforts of the "faithful few" who expect little personal benefit from either; that the surgeon and the specialist, who occasionally get patients referred by violators, are not interested, except when an unlicensed man takes a patient away from them, when they are the loudest complainants—and want the law enforced at once. (This paper will be published in full in the *Federation Bulletin.*)

DISCUSSION

DR. CHARLES B. PINKHAM, Sacramento, Calif.: Dr. Rypins has rightly said enforcement requires men and money. In California, the state board of control has apportioned over $107,000 for the next biennium. We now have an enforcement machine consisting of a special agent of the law, a chief counsel who attends to all of our court cases, exclusive of prosecutions. He handles our appeals after the revocations, writs of review and so on. We have a special agent in southern California. We have a clerical force that goes with this enforcement machine. The two special agents are under civil service; one of them happens to be a graduate from the law school and admitted to the bar. He has an interesting volume which contains all the court decisions regarding the medical practice acts in California as far back as he can find them, and he has the various citations throughout. As Dr. Rypins said, the violators spend a tremendous amount of money. We find them hiring the most astute criminal lawyers in the state, and it requires considerable knowledge of the law, on the part of the district attorney of the prosecutors, to offset the ability of these defendants' attorneys. Something has been said about admissible evidence. That is a very difficult thing to get. I cannot speak too strongly in favor of the annual registration fee. One very effective assistance we have in California in enforcing the $2 registration is the hearty cooperation of the federal authorities.

DR. D. L. STRICKLER, Denver: I am especially interested in the proposition of annual registration. As chairman of the committee on public policy and legislation for our state society, I presented this to the Colorado state society at our last meeting, and the principle was accepted, but it was felt the medical profession was not yet ready, not properly educated for it, and we should continue a campaign during the next two years.

DR. CHARLES J. KELLY, New Jersey: There is an old saying that the farthest hills look the greenest. I came to Chicago full of enthusiasm in my limited knowledge of the basic science law, but after hearing it described today, I have come to the full realization of how much better fixed we are in New Jersey. We do not need a basic science law. We have a composite board composed of eleven men, five of whom are graduates of the old school, three homeopaths, one eclectic, one osteopath, and one chiropractor. The chiropractors had their own board in 1920. They licensed 600. In 1921, two chiropractors were put on the state board of medical examiners. There has not been a chiropractor licensed in New Jersey since. In regard to the actual question of administration of the law in New Jersey, the most important thing, of course, is the question of prosecutions. As Dr. Rypins has emphasized, there may be the finest kind of a law; unless it is followed up with prosecutions, nothing will be accomplished. Incidentally, I think that is one weak spot about the proposed basic science law in Wisconsin. Examinations in subjects that should remain in the hands of the medical profession are being passed over out of control of the medical profession.

DR. H. M. PLATTER, Columbus, Ohio: In California, Dr. Pinkham has not control over osteopathy or over chiropractic. He only has supervision over a certain number of practitioners, so that the results he obtains in a strenuous program of prosecutions cannot be applied to these people who have boards of their own. In the state of New York and in Texas that condition does not obtain. In Ohio we have osteopathy under the medical board, and we have chiropractic under the medical board, but it is unfortunate that we have a sliding scale of educational qualifications instead of the single standard of admission. We have been fairly active over a period of years in prosecution.

Safeguarding State Records

DR. CHARLES B. PINKHAM, San Francisco: Suggestions on how possibly to "block" imposition: (1) Photograph affixed to every application and made a part of the statement of the applicant under oath; (2) Certified duplicate for the purpose of sending to other sources if necessary, thus keeping the completed application in the home file.

Application: Insist that each application be fully completed and if for reciprocity, make no indorsement when the applicant fails to affix his affidavit and his recent photograph. Also before making indorsement compare the data, photograph, etc., on the application from a sister state with the application in the files of the home state.

Duplicate: Issue no duplicates unless the request is supported by photograph and affidavit of applicant.

Diplomas: Substantiate applicant's graduation by endorsement of medical college. When diploma has been lost or destroyed and medical college is extinct, greater diligence in verifying credentials is demanded.

If from foreign institutions, verification by correspondence with the medical college is of paramount importance. Also bear in mind that some foreign countries grant authority to practice without requiring the licentiate to be a graduate of a medical school. Do not confuse a foreign license to practice (called a diploma by all foreign applicants) with the diploma granting the degree "doctor of medicine" earned only after writing an approved thesis which often must be defended by open debate by the candidate for the doctor of medicine degree. Medical schools are urged to use greater care in determining the identity of an applicant for an official transcript of his premedical and medical credentials. (This paper will be published in full in the *Federation Bulletin.*)

Interstate Endorsement Versus Reciprocity

DR. G. M. WILLIAMSON, Grand Forks, N. D.: Now in view of the fact that a better trained class of men are being graduated from our medical schools, the time seems ripe when we might seriously consider a revision of our methods of interchange of state licenses. Cannot a plan of interstate endorsement be adopted that would be acceptable to the great majority of states? The splendid work being done in the Biographic Department of the American Medical Association, where detailed and more complete records of men are being made each year, makes it easy to trace the individual applicant for license or endorsement, and the information that can be obtained in this department I have no doubt will play an important part in any plan of interstate endorsement we might adopt. As a prerequisite to any plan of interstate endorsement, the various boards generally agree as to the classification of medical colleges, and that the training of students in the same is adequate, or, in other words, more or less standardized. I believe it is generally agreed that the Council on Medical Education and Hospitals is properly equipped and can make that classification. I would suggest a plan of interstate endorsement embodying the following features: A graduate of 1920 and thereafter of class A medical colleges as rated by the Council on Medical Education and Hospitals of the American Medical Association who has served at least one year rotating internship in an acceptable hospital, who has been duly licensed by examination by the board of any

state a member of this federation, and has been in active practice in the state in which he was licensed for at least five years, and been a member of his local or state society for the major portion of that time, would be acceptable for endorsement by the board of any state, provided he complies with the rules and regulations of that board. A practitioner duly licensed previous to 1920, whose course of study and instruction complied with all the laws, rules and regulations of the board of medical examiners of the state where he seeks endorsement and who would have been eligible to apply for examination in that state at the time he received his license would be acceptable for endorsement. (This paper will be published in full in the *Federation Bulletin.*)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARIZONA

Desert Sanatorium Expands.—It was announced, April 2, that the Desert Sanatorium, Tucson, will at once begin a program of construction which will triple its present capacity. There will be four new buildings for patients, each containing eight suites of three rooms, four private rooms, and sun terrace and other buildings for nurses and resident physicians. The buildings, which will be occupied about September 15, will cost about $300,000. Dr. Bernard L. Wyatt, the medical director, will devote his whole time to the institution; Dr. Charles W. Mills is associate medical director, and Dr. Frank C. Balderrey, assistant medical director. There is a board of twenty consultants which includes prominent physicians in various sections of the country. Dr. William H. Welch, Baltimore, is the honorary president.

CALIFORNIA

Society News.—The San Diego County Medical Society turned its March 8 meeting over to the Medical Woman's Club of San Diego, which discussed medical women's work in the county. The council of the San Diego County Medical Society, March 7, voted its disapproval of the publication in *California and Western Medicine* of the "Physicians' Directory."——The Los Angeles County Medical Association held a joint meeting with the staff of the White Memorial Hospital, April 7, and was addressed by Dr. Edward H. Risley on "The Effect of Diet on the Chemistry of the Urine"; Dr. Fred B. Moor, "Cholecystography," and Dr. George Thomason on "Surgery of Liver Abscess." At a special meeting of the society, April 5, Prof. William B. Munro of Harvard University spoke on "The Comparative Contributions of Lister and Osler."

Promotions at Stanford University School of Medicine.—The dean of Stanford University School of Medicine, San Francisco, announces the following promotions of members of the staff:

ACADEMIC STAFF

Dr. George D. Barnett to full professorship in medicine (internal medicine).
Dr. William Edward Chamberlain to full professorship in medicine (radiology).
Dr. Henry G. Mehrtens to full professorship in medicine (neurology).
Dr. Robert R. Newell to associate professorship in medicine (radiology).
Dr. Harry A. Wyckoff to associate professorship in medicine (clinical pathology).
Dr. C. Frederic Fluhmann to associate professorship in obstetrics and gynecology.
Dr. Lloyd B. Dickey to assistant professorship in medicine (pediatrics).
Dr. Maurice L. Tainter to assistant professorship in pharmacology.
Dr. George D. Brown to instructorship in surgery.

CLINICAL STAFF

Dr. Karl L. Schaupp to associate clinical professorship in obstetrics and gynecology.
Dr. Henry A. Stephenson to associate clinical professorship in obstetrics and gynecology.
Dr. Hans von Geldern to assistant clinical professorship in obstetrics and gynecology.
Dr. William Hulbert Barrow to associate clinical professorship in medicine (internal medicine).
Dr. Norbert J. Gottbrath to assistant clinical professorship in medicine (neurology).
Dr. Roland P. Seitz to assistant clinical professorship in medicine (pediatrics).
Dr. Harold A. Fletcher to assistant clinical professorship in surgery (otorhinolaryngology).
Dr. James C. Parrott to clinical instructorship in medicine (pediatrics).
Dr. Stuart C. Way to clinical instructorship in medicine (dermatology).
Dr. J. Minton Meherin to clinical instructorship in surgery.
Dr. Robert A. Ostroff to clinical instructorship in surgery.
Dr. Lorruli A. Rethwilm to clinical instructorship in surgery (anesthesia).

CONNECTICUT

Yale Plans Biochemical Institute.—Yale University, New Haven, announces that it is prepared to found a biochemical institute, where physicians, chemists, biologists and physicists may combine their effort in attacking biochemical problems. The necessary funds have not, however, been secured. The Sterling Laboratory of Chemistry at Yale is now taking the first step to manufacture a new sulphur constituent of the blood, thus far known as "constituent X," in sufficient quantities for thorough biologic and clinical experiments. The production of the minimum amount necessary (100 Gm.) will require as raw material about 40 barrels of blood which the New Haven packing houses have agreed to furnish at small cost. "Constituent X" was discovered by a graduate student in Canada, who later came to Yale in 1926 as a Sterling fellow in chemistry. To determine what this substance is, what it is good for, and how it can be easily made, will carry the investigation beyond the department of chemistry into other departments of the university, thus exemplifying the cost of biochemical research and the need for a biochemical institute.

DISTRICT OF COLUMBIA

Diphtheria Immunization Campaign.—The district health department plans to conduct a city-wide campaign of immunization against diphtheria this summer. A committee has arranged to hold a demonstration on the Ellipse in Washington, during the child health May Day program, April 30. Nine tents will be erected for health demonstrations, and various organizations for girls and boys will take part. Since May 1 comes on Sunday, child health day will be observed, April 30. The parent-teacher associations will begin at that time a "preschool roundup" of children to discover possible physical defects, and to urge parents to send their children to the nearest child health center.

Another "University President" Indicted.—Louis W. Rapeer, the president of Research University, Washington, D. C., and Mrs. Virginia Hayner Saunders, the registrar, were indicted, April 4, by a grand jury, on a charge of using the mails to defraud. They are alleged to have devised a scheme to obtain by false pretenses money and property from such persons as they could induce to deal with them. The indictment charges, according to the Washington *Star*, that Rapeer and Mrs. Saunders represented Research University as a bona fide school which offered students instruction by capable instructors who were heads of departments of the U. S. government; that they falsely represented that various persons were members of the boards of trustees of the university; that branches of the university were being established in the principal cities of India; that the university maintained an employment service for graduates whereby it would help them into better positions; that the university gave courses of study for physicians, dentists, pharmacists and nurses, and that they, by fraudulent pretenses, intended students to understand that by paying the required fees and tuition they would receive diplomas evidencing the conferring of degrees. The grand jury reported that Rapeer and Mrs. Saunders knew that the several offenses alleged in the indictment were false, in that Research University was a "mere pretended university" and could not give to students the instruction they had set forth. The case was prepared for the grand jury by Assistant U. S. Attorney Pearl McCall.

FLORIDA

Bills Introduced.—Senate bill 10 and house bill 11 would allow counties having populations between 30,000 and 60,000 to establish and maintain public hospitals.

State Medical Election.—At the annual meeting of the Florida Medical Association, West Palm Beach, April 5-6, Dr. John A. Simmons, Miami, was elected president; Drs. William E. Van Landingham, West Palm Beach; Frederick J. Bowen, Jacksonville, and John E. Hall, West Palm Beach, vice presidents, and Dr. Shaler A. Richardson, Jacksonville, secretary-treasurer.

ILLINOIS

Medical Director Resigns.—Dr. Walter C. Martini, medical director of the Champaign County Tuberculosis Sanatorium, Urbana, has tendered his resignation, effective July 1, and will become associated with the Palmer Tuberculosis Sanatorium at Springfield. Dr. Martini was formerly medical director of the Morgan County Tuberculosis Sanatorium and was connected with the Chicago Municipal Tuberculosis Sanitarium and the U. S. Veterans' Bureau.

Liquor Licenses Revoked.—The district prohibition administrator, with headquarters in Chicago, recently revoked the liquor licenses of the following for the reasons indicated:

Dr. H. Eugene Delavergne, Kankakee, inaccurate records; illegal issuance of prescriptions; conspiracy.
Dr. Frederick C. Hamilton, Kankakee, inaccurate records; illegal issuance of prescriptions.
Dr. Orson Bailey Spencer, Kankakee, inaccurate records; diversion; illegal issuance of prescriptions.
Dr. Benjamin F. Uran, Kankakee, inaccurate records; illegal issuance of prescriptions; conspiracy.
Dr. William H. Wilson, Danville, inaccurate records; illegal issuance of prescriptions.

Society News.—The Lake County Medical Society gave a banquet at Waukegan, March 16, in honor of Dr. Leon H. Tombaugh, to celebrate his fiftieth year in the practice of medicine. Dr. Tombaugh's associates presented him with a radio.——Dr. William O. Krohn, Chicago, will address the May meeting of the St. Clair County Medical Society, East St. Louis, on "Psychiatry in Relation to Crime and Disease"; this will be a joint meeting with the attorneys and dentists. ——Dr. Gladys R. H. Dick, Chicago, addressed the Whiteside County Medical Society, Sterling, April 7, on "Scarlet Fever"; Dr. Dick is said to have gone to Fulton, where there was an epidemic of scarlet fever, to assist in and supervise the application of the "Dick test" to school children. ——Dr. Arthur J. Atkinson, Chicago, addressed the Elgin Physicians' Club, April 11, on "Gastric Ulcer."

Chicago

Liquor Licenses Revoked.—The local prohibition administrator recently revoked the liquor licenses of the following for the reasons indicated:

Dr. Daniel E. Egan, inaccurate records; illegal issuance of prescriptions.
Dr. Phillip Rosenblum, inaccurate records; illegal issuance of prescriptions.
Dr. Samuel Weinfeld, inaccurate records; conspiracy; illegal issuance of prescriptions.

Cash Prize for Tuberculosis Discovery.—An anonymous donor has given the directors of the Chicago Municipal Tuberculosis Sanitarium $1,000 to be awarded to some physician, scientist or laboratory worker of Chicago who develops during the year the most useful discovery for the prevention or cure of tuberculosis. The donor visited the Chicago Municipal Tuberculosis Sanitarium and was impressed with the work of the laboratory in particular and the comparatively small reward received by the workers. Francis X. Busch, a member of the board of directors, in making the announcement, stressed the fact that the prize is not open to laymen who have untried ideas on how to cure tuberculosis.

Society News.—The council of the Chicago Medical Society voted, April 12, to discontinue the telephone bureau in view of the cost of operation and the small number of members who avail themselves of this service. A joint meeting was held, April 20, with Loyola University School of Medicine on "Studies on the Action of Parathormone," the speakers being William C. Austin, Ph.D., head of the department of chemistry; Dr. Wilhelm K. Hueper, assistant professor of pathology; Dr. Samuel A. Matthews, head of the department of physiology, and Dr. Edward Allen.——The Chicago Council of Medical Women will hold a joint meeting with the Chicago Medical Society, April 27; papers will be read by Drs. Faith S. Fetterman of the Woman's Medical College of Pennsylvania, and Dr. Johanna Heumann.——The Society of Industrial Medicine and Surgery will conduct a symposium on industrial health hazards, May 2, at the Great Northern Hotel, 8:30 p. m. The Chicago Urological Society will meet, April 28, at the John B. Murphy Memorial Building, 50 East Erie Street, and among others, Dr. Edgar M. Medlar of the University of Wisconsin School of Medicine will discuss "Renal Tuberculosis"; members are invited to a urologic clinic at the research hospital of the University of Illinois at 9 a. m.——At the April 25 meeting of the Chicago Society of Internal Medicine, City Club, Dr. Joseph A. Capps will read a paper on "Pericardial Pain—An Experimental and Clinical Study"; George Wakerlin, "Studies on Motility of the Gallbladder"; Drs. Karl K. Koessler and Siegfried Maurer, "Experimental and Clinical Studies on Pernicious Anemia," and Bertha Kaplan, Drs. Jacob C. Geiger and Charles S. Williamson, "Amebic Dysentery in Chicago with Results of Examination of About 500 Food Handlers." ——Dr. William A. Evans addressed the Medico-Historical Club of the University of Illinois College of Medicine, April 13, on "The History of Typhoid Fever in Illinois."

IOWA

Typhoid at Haywarden.—Twenty cases of typhoid were reported at Haywarden, March 25, due, it was said, to infected milk. Nurses from Sioux City and Yankton were called to help care for the sick.

KANSAS

Personal.—Dr. William R. Palmer, Glasco, has been appointed county health officer to succeed Dr. Leo E. Haughey.

State Medical Meeting.—The sixty-first annual meeting of the Kansas Medical Society will be held at Hutchinson, May 3-5, under the presidency of Dr. Earl G. Brown, Topeka. The general sessions will all be in the Masonic Temple. The council meets, May 3, at noon, in the Rorabaugh-Wiley Tea Room, where, at noon on the following day, the secretaries of all county societies meet. The Reno County Medical Society will give a banquet on the evening of May 4, and a golf tournament will be held at the Hutchinson Country Club, May 2. The first meeting of the house of delegates will be at 7:30 p. m., May 3. Among the guests of honor at this meeting will be Drs. Jabez N. Jackson, President-Elect of the American Medical Association; Dean Lewis, Baltimore; Albert H. Andrews, Chicago; Arthur Steindler, Iowa City, Iowa; Lewis J. Moorman, Oklahoma City, Okla., and Alfred Schalek, Omaha. In addition, many prominent members of the profession of the state will speak.

MAINE

Society News.—Dr. Maxwell E. MacDonald, Boston, addressed the Penobscot County Medical Society at Bangor, March 15, on "Syphilis of the Central Nervous System."

Dr. Gehring Invited to New York.—Dr. John G. Gehring, Bethel, has been invited by the board of trustees of the Neurological Institute, New York, to take charge of a ward, when completed, in its new building at the Columbia University Medical Center. The ward has been endowed with a gift of $200,000 by William Bingham, 2d. In an editorial, the New York *Times* notes that Dr. Gehring has for years lived and worked in a remote village of a few hundred inhabitants, and that the honor which has now come to him illustrates that the world will beat a path to the door of the man who does something well.

MASSACHUSETTS

Licenses Revoked and Suspended.—The board of registration in medicine reports that the license of Dr. Robert E. Conlin was revoked, February 3, on account of the performing of an abortion; the license of Dr. Arthur Stanton Hudson was suspended, March 31, for violation of the prohibition act and gross misconduct in the practice of his profession, as shown in association with an unregistered person.

Society News.—Dr. Howard M. Clute addressed the Norfolk South District Medical Society, April 7, on "Differentiation of Diseases of the Thyroid Gland."——Dr. Arthur B. Lyon addressed the one hundred and first meeting of the New England Pediatric Society, April 8, Boston Medical Library, on "William P. Dewees: A Pioneer in American Pediatrics."——Dr. Henry Pinkerton addressed the Harvard Medical Society, February 15, on "Reaction of Oily Substances Entering the Lungs."——Dr. Harold C. Bean, Salem, addressed the North Shore Medical Fraternity, April 7, on "Back Conditions and Their Treatment."

Personal.—Dr. Frank B. Granger, Boston, addressed the New York Electrotherapeutic Society, April 6, on "Physical Therapy in Hospitals."——Dr. George H. Monks has resigned as president of the Boston Medical Library, and John W. Barton has been elected to that position; Dr. Monks has been president since 1919.——Dr. Edgar D. Hill, Plymouth, has been appointed medical examiner of the Third Plymouth District by the governor for the sixth time; Dr. Peirce H. Leavitt, associate medical examiner of the First Plymouth District.——Edwin B. Wilson, Ph.D., professor of vital statistics,

Harvard School of Public Health, addressed the scientific staff of the Rockefeller Institute for Medical Research, April 8, on "What Is Statistics?"

MICHIGAN

Illegal Practitioners Arrested.—Following an investigation by members of the state and city health departments, four persons were arrested, March 26, at Flint, charged with practicing medicine without a license. They were, it is reported, John Buddo, who claims to be "the seventh son of a seventh son," James W. Myers, Rev. Helga E. Northrup and Mrs. Edna Grandey, all of whom are said to be connected with the spiritualist church.

State to Charge for Blood Analysis.—The state health commissioner has issued an order, according to the Jackson *Citizen-Patriot*, requiring a charge for a complete blood examination. The state laboratory has been providing this service for physicians without charge. It is said that the laboratory privilege is being used in excess by a few physicians, whereas the majority of physicians do not utilize its facilities. In the last year, several thousand tests are said to have been made without charge for 128 physicians. There are more than 7,000 physicians in the state.

MISSISSIPPI

State Offers Course in Diagnosis.—Through the courtesy of the board of trustees of the Mississippi State Sanatorium, a course in diagnosis of diseases of the chest is being offered to physicians of the state at that institution. Some counties have made special arrangements for their health officers to avail themselves of this opportunity.

Society News.—At the recent meeting of the South Mississippi Medical Society, Hattiesburg, Dr. Charles C. Bass, New Orleans, spoke on "Diagnosis, Treatment and Management of Malaria"; Dr. Frank H. Hagaman, Jackson, "Disabilities of the Hip"; Dr. Henry W. E. Walther, New Orleans, "Gonorrhea in Women"; Dr. John R. Kittrell, Laurel, "Reminiscences of a Jones County Doctor," and the Hon. Ellis Cooper, Laurel, "Legal Medicine."

MISSOURI

Court Decides Medical College Is Not Reputable.—The Supreme Court of Missouri rendered a decision, April 8, declaring that the Kansas City University of Physicians and Surgeons is not a reputable medical college within the meaning of the state law, and that its graduates are not entitled to examination by the state board of health.

Veteran Guests of Honor.—At a meeting of the Jackson County Medical Society, Kansas City, April 5, the physicians of that community who have been in practice at least fifty years were the guests of honor. They were:

Dr. John Wilson	Dr. John S. Mott
Dr. Charles W. Burrill	Dr. Hal Foster
Dr. Homer O. Leonard	Dr. George W. Davis
Dr. W. F. Morrow	Dr. John R. Snell

Dr. Ernest Von Quast

The speaker of the evening was Dr. Malcolm L. Harris, Chicago, chairman of the Judicial Council of the American Medical Association.

Review of New Medical Legislation.—There will become effective, July 2, some amendments to the medical practice act of Missouri which the state medical association had a part in bringing to pass. Applicants for examination by the state board of examiners will be required to furnish evidence of attendance at a reputable medical college throughout four terms of nine months each, and of having received a diploma from such college; candidates for examination by the board must receive an average of 75 per cent and not fall below 50 per cent on any one subject. An amendment provides for reciprocity, and authorizes the state board of health to initiate prosecutions against violators of the medical practice act. The board may accept at its discretion the certificate of the National Board of Medical Examiners in lieu of its own professional examination. An amendment rescinds that portion of the law which licenses practitioners who have lived and practiced in one county for twenty-one years. A bill signed by the governor makes it illegal for a medical school to grant a diploma to any person unless he has attended the required number of years; it is made illegal for any person to receive a diploma without having attended the required number of years. This is a new statute and efforts were made by the diploma mill supporters to block its passage. The governor signed the bill whereby treatment in the state university hospital at Columbia for indigent crippled children is provided. The state medical society opposed the nurses' bill, which would have rescinded the present provisions for practical and obstetric nurses. This bill died on the calendar. There was an attempt to abolish the office of state health supervisor and to divide part of his salary among members of other boards. This met opposition in the senate and the bill was amended so as to retain the office of health supervisor and his prerogatives and duties. As amended, the bill went back to the house and was passed. The state medical journal considers that the medical legislative program was a success, due largely to the handling of the bills by Dr. Guy B. Mitchell, Branson, and Dr. Charles H. Wallace, St. Joseph, the work of Mr. Caruthers and the cooperation of the committee of the state medical society.

MONTANA

Personal.—The Beaverhead board of commissioners has reappointed Dr. Frederick M. Poindexter, Dillon, secretary of the county board of health.

Clinical Conference.—A clinical conference was conducted at St. Vincent's Hospital, Billings, March 25, which was attended by physicians from Sheridan, Lewiston, Fromberg, Lovell, Glendive, Cody, Hardin, Columbus, Red Lodge and Roundup. There were demonstrations of cases and apparatus at the morning session and scientific papers and discussions in the afternoon.

NEW YORK

Society News.—The New York Academy of Medicine held a symposium on pernicious anemia, April 21; Dr. Frederic E. Sondern spoke on "Laboratory Aids in Diagnosis"; Dr. Israel Strauss, "Neurologic Symptoms and Their Pathology," and Dr. George R. Minot and Dr. William P. Murphy, "Treatment by a Diet Rich in Liver." Dr. Robert H. Halsey demonstrated a motion picture on "Gad's Experiment Showing the Mitral and Aortic Valves in Action."

Personal.—Dr. Daniel V. O'Leary, Jr., has taken up the duties of deputy city health officer of Albany, succeeding the late Dr. William J. Wansboro.——Harry A. Cheplin, Ph.D., associate professor of bacteriology, Syracuse University, has joined the staff of the Mulford Biological Laboratories.——Dr. Konrad E. Birkhaug, assistant professor of bacteriology, University of Rochester School of Medicine and Dentistry, Rochester, has been elected a member of the Norwegian Pathological Society in Oslo.

New York City

Hospital News.—The medical staff of the German Polyclinic gave a testimonial dinner in honor of Dr. Ludwig Weiss, March 31, to celebrate his fiftieth anniversary in the practice of medicine; Dr. Joseph F. Saphir was toastmaster; among the speakers were Drs. Boldt, Phister, Zwisohn and Ashley.——The trustees and staff of Mount Sinai Hospital issued invitations to the William H. Welch lectures by Prof. Richard Willstätter, April 13-14, 8:30 p. m., on "Some Recent Advances in Enzyme Research."——The United Israel-Zion Hospital is conducting a campaign for $300,000 to equip the new laboratory building and build a nurses' home.

Society News.—Dr. James J. Walsh addressed the Medical Society of the County of Kings, April 19, on "Fake Cures," and Dr. Samuel E. Whitnall, Robert Reiford professor of anatomy, McGill University Faculty of Medicine, Montreal, on "An Anatomist's View of Chiropractic."——The New York Physicians' Art Club has been organized by contributors to the recent Physicians' Art Exhibit held at the New York Academy of Medicine.——The International Medical Club held its inaugural dinner, April 12, at the New York Academy of Medicine. The principal speakers were Hon. Bainbridge Colby and the Belgian ambassador to the United States.

Personal.—Dr. Haven Emerson, professor of public health administration, Columbia University, delivered the sixth Sedgwick memorial lecture at the Massachusetts Institute of Technology, Boston, on the afternoon of April 8, on "Public Health Diagnosis."—Dr. Harold M. Hays gave an address at Ohio State University, Columbus, and another at the Academy of Medicine of Cincinnati, April 8, on "Problems of the Hard of Hearing Child in the Public Schools."——Dr. William W. Blackman, Brooklyn, was guest of honor at a testimonial dinner, March 28, to celebrate the completion of fifty years in the practice of medicine; Dr. Blackman was presented

with a watch by his associates.——Dr. Hideyo Noguchi has been made an associate member of the French Society of Biology.——Dr. Harry C. Saunders has been appointed instructor in dermatology and syphilology at the University and Bellevue Hospital Medical College.——Dr. Isaac M. Rubinow, formerly of Philadelphia, has been appointed executive director of the Brooklyn Federation of Jewish Charities, and will take up his new duties, June 1. Following the World War, Dr. Rubinow went to Palestine to organize the Hadassah Medical Organization.——Dr. Alfred Adler, Vienna, Austria, sailed for home from New York, April 9, and his chief collaborator, Dr. Seif, was due to arrive, April 20.

OHIO

New Health Commissioner for Akron.—Dr. Melville D. Ailes has been appointed health commissioner of the city of Akron to succeed Dr. Donald D. Shira, resigned. Dr. Ailes, for two years, has been health commissioner of Sidney and Shelby County; he assumed his duties at Akron, April 18.

Personal.—Dr. Hugh H. Dorr, Columbus, has been appointed chief medical examiner of the state industrial commission, to succeed Dr. Thurman R. Fletcher, resigned. Dr. Fletcher was chief medical examiner for eight years. ——Dr. John K. Scudder has been reappointed by the governor as a member of the Ohio State Medical Board; Dr. Scudder has completed twelve years of service on the board.——Dr. John H. Wolfe, De Graff, celebrated the completion of his fiftieth year in the practice of medicine, April 1, at a dinner given in the Presbyterian Church to members of the Logan County Medical Society and others.

Replica of Ancient Pharmacy.—A replica of a fifteenth century pharmacy that was exhibited at the Paris Exposition of 1900 has been presented to the physiology department of the University of Cincinnati, where it is installed in the lecture room. The central fountain, designed and modeled by Innocenti Bruno and Prosperi Francesco, is set in the wall between cases containing jars and vases, and in front of the fountain stands the apothecary's counter. The herbs are reproduced pictorially in tiles in the floor with a remarkable degree of artistry in form and color. The general idea was that of Prof. Carlo Guerrini. The ceramics are the work of the Cantagalli pottery of Florence.

County Society News.—The Montgomery County Medical Society devoted its March 4, 1927, meeting to clinical reports; cases were presented by eleven members.——Dr. Guy G. Giffen, Dayton, addressed the Butler County Medical Society, March 1, Middleton, on "Pyelitis."——Dr. George Rockwell, Cincinnati, addressed the Clermont County Medical Society, March 15, on "Diagnosis, Treatment and Management of Diabetes Mellitus."——Dr. Theodore F. Myler, Xenia, addressed the Greene County Medical Society, March 3, on "The Public Health Function of the County Medical Society.——Dr. Harry E. Shilling, Troy, addressed the Miami-Shelby County Medical Society, Piqua, February 3, on "Abnormal Presentations in General Obstetric Practice," and Dr. Vernon W. LeMaster, Sidney, "Danger of Feeding Prepared Food of High Sugar Content to Babies."——Dr. Arthur J. Cramp, Chicago, addressed the Toledo Academy of Medicine, March 4, on "Deafness Cure Quackery and Pseudomedicine."——Dr. Arthur G. Cranch addressed the Cleveland Academy of Medicine, March 18, on "Artificial Respiration" and Dr. Harry E. Stewart, New Haven, Conn., "Modern Physiotherapy in Medical Practice."——Dr. Francis E. Senear, Chicago, addressed the Summit County Medical Society, Akron, March 1, on "Mycotic Diseases of the Skin."

OREGON

Society News.—At the Marion-Polk-Yamhill County Medical Society meeting, Salem, March 15, Dr. Harold C. Bean, Portland, spoke on "Recent Developments in Treatment of Pernicious Anemia," and Dr. Everett H. Hobson, Salem, "Nitrous Oxide Anesthesia."

Hospital News.—The Doernbecher Hospital, Portland, recently received a complete dental equipment and apparatus, the cost of which was $2,500. The gift was made by the dentists of the state in their desire to engage in the relief activities carried on by the medical school.

Personal.—Dr. Andrew J. Giesy, Portland, was guest of honor at a dinner, March 23, attended by seventy-five physicians and their wives. Dr. Giesy has been practicing medicine for fifty years, forty of which have been spent in Portland.——Dr. Harold C. Bean, Portland, has been appointed a member of the state board of health to succeed the late Dr. Charles M. Barbee.

PENNSYLVANIA

Personal.—Dr. George M. Studebaker has been reappointed a member of the board of health of Erie for a term of five years. Dr. Studebaker is now president of the city board of health.——Dr. Robert A. Keilty has resigned from the staff of the Geisinger Memorial Hospital, Danville, and will practice in Washington, D. C.

Twelfth Mellon Lecture—Pneumonia.—Dr. Russell L. Cecil, New York, will give the twelfth Mellon Lecture at the Pittsburgh Athletic Association's auditorium, May 12, 8:30 p. m., on "The Specific Therapy of Pneumococcus Pneumonia." The lecture is given under the auspices of the Society for Biological Research of the University of Pittsburgh School of Medicine.

Hospital News.—The new Delaware County Hospital at Upper Darby is practically completed; the hospital embodies the latest ideas in construction and its initial capacity will be fifty-four beds. A special committee of the board of trustees is now considering applications for positions on the staff. The citizens voted in 1921 to establish a county hospital, and construction started in October, 1925.

Philadelphia

Society News.—The Philadelphia Pediatric Society held a symposium on milk control, April 12; Dr. Wilmer Krusen discussed "Milk Control in Philadelphia"; George W. Grim, "Suburban Milk Control," and Mr. Irvin, state division of milk control, "Milk Control in the State of Pennsylvania."——The program of the Philadelphia County Medical Society, April 13, was on medical economics. Franklin S. Edmonds, chairman of the tax commission, discussed "Taxation in Pennsylvania as It Applies to the Physician," and Harry A. Mackey, city treasurer, "Changes in the Compensation Laws and Allied Medical Legislation."——Dr. Harry A. Goalwin, New York, addressed the Philadelphia Roentgen Society, April 7, on "Precision in Cranial Roentgenology."——Dr. Sandor Ferenczi, formerly president of the International Psychoanalytic Association, addressed the general meeting of the College of Physicians, April 21, on "Psychanalysis in Relation to General Medicine."

TENNESSEE

Personal.—Dr. Owen F. Agee succeeds Dr. Claude A. Collins at the Dyer County Health Unit; Dr. Collins goes to Kingston to accept a similar position.——Dr. Henry M. Cass has been elected president of the Appalachian Hospital at Johnson City.

Health at Knoxville.—Telegraphic reports to the U. S. Department of Commerce from sixty-eight cities with a total population of about 30 million, for the week ending April 9, indicate that the highest mortality rate (19.9) was for Knoxville, and that the rate for the group of cities as a whole was 13.7. The mortality rate for Knoxville for the corresponding week last year is not available, but for the group of cities was 17.1.

Knoxville's First Health Week.—Official and civic organizations at Knoxville have planned to conduct the first "health week" from May 1 to May 7, provided the Rotary Club consents to combine the movement with its annual "boys' week." Dr. Marvin F. Haygood, health officer, was elected president of the organization; among other officials is Dr. Robert B. Wood, representing the Knox County Medical Society. The object of the campaign is to bring before the public the necessity of creating better health conditions in that community.

TEXAS

State Medical Meeting.—The sixty-first annual meeting of the State Medical Association of Texas will be at El Paso, April 26-28, under the presidency of Dr. William Keiller, Galveston. The president's reception will be Wednesday night, at the Hotel Orndorff. The general and section meetings will be in the Court House-Liberty Hall. The staff of the U. S. Army William Beaumont General Hospital will hold open house Tuesday afternoon, following which there will be a drive to Mount Franklin, Fort Bliss, and into Mexico. There will be clinic luncheons at the Hotel Orndorff, Tuesday, Wednesday and Thursday, by Drs. Stuart Pritchard, Battle Creek, Mich., Donald C. Balfour, Rochester, Minn., and Frederick H. Falls, Chicago. The alumni banquets will be Tuesday, six o'clock; the meeting of the house of delegates, Monday, 1:30 p. m., and meetings of the Texas Railway Surgeons' Association, Texas Radiological Society, the

pathological society and a conference of municipal county and state health officers on Monday. The Texas Pediatric Society holds its luncheon Wednesday. A golf tournament will be held at the Country Club, Monday, the prizes being three silver cups. Dr. Clarence St. Clair Drake, Chicago, field director, American Public Health Association, will address the section on public health on "Observations in City Health Work in Texas Based on Surveys and Appraisals"; Dr. Falls, the section on gynecology and obstetrics, on "Occipitoposterior Positions"; Dr. Balfour, the section on surgery, on "Incidence and Treatment of Complications of Duodenal Ulcers"; Dr. William A. Evans, Chicago, will address the general meeting, Tuesday, 4 p. m., on "What Next in Consumption." Many interesting subjects will be discussed by prominent physicians of Texas.

UTAH

Salt Lake City Opens Medical Building.—The public was invited, April 4, to the opening of the Medical Arts Building, 54 East South Temple Street, Salt Lake City. There was a reception in the lecture room on the main floor. This ten story building of reinforced concrete, faced with brick and trimmed with terra cotta, is thoroughly modern, and is the first of its kind in the community. The ground floor is for stores, and the upper nine floors are for offices for physicians and dentists. The office tenants are stockholders in the Medical Arts Building Corporation. Dr. Frederick Stauffer is president; E. A. Tripp, D.D.S., vice president; Dr. Maurice M. Critchlow, secretary; Dr. Emerson F. Root, treasurer, and these, with Drs. William R. Calderwood and Howard P. Kirtley, constitute the board of directors. The *Deseret News*, April 2, published a full page announcement of the opening, with a list of the physicians and dentists, laboratories, pharmacy and other tenants who will occupy the building. A three story garage will be constructed this summer behind the Medical Arts Building with foundations heavy enough to carry a superstructure duplicating the first unit.

WEST VIRGINIA

Dr. McSherry Honored.—Dr. James Whann McSherry, Martinsburg, has been elected an honorary member of the West Virginia Medical Association. Dr. McSherry is an ex-president of the association, a veteran of the Civil War, and a bank president, and is still actively engaged in practice at the age of 94.

Society News.—Mr. Sterrett O. Neale has severed his connection with the *West Virginia Medical Journal*, and Mr. Joe W. Savage has been appointed to the vacancy.——Dr. Hunter H. McGuire, Winchester, addressed the Eastern Panhandle Medical Society, March 9, on "Incipient Cataract."——Dr. William F. Rienhoff, Jr., Baltimore, addressed the Parkersburg Academy of Medicine, March 3, on "Hyperthyroidism."

WISCONSIN

Personal.—The board of trustees of Sunny View Sanatorium has appointed Dr. Reuben D. H. Bitter, Oshkosh, attending physician, to succeed the late Dr. Frank Brockway; Sunny View Sanatorium is the tuberculosis sanatorium for Winnebago and Fond du Lac counties.——Dr. Karl W. Doege, Marshfield, was elected president of the Soo Railway Surgical Association at the recent annual meeting in Minneapolis.

Courses in Hospital Administration.—Two courses in hospital administration and management will be given during the summer at the College of Hospital Administration of Marquette University, Milwaukee, the first, a two weeks' course, beginning June 6, the other, a six weeks' course, beginning June 25. They are open to any one interested in hospital work. Details can be obtained from Dr. John R. Hughes, dean, College of Hospital Administration, 131 Eleventh Street, Milwaukee.

WYOMING

Personal.—Chugwater has secured the services of Dr. William A. Lusk, formerly of Trumbull, Neb.——Dr. Henry L. Stevens, Laramie, recently addressed the Pre-Medic Club of the University of Wyoming on "The Early History of Medicine."——Dr. John D. Shingle, Cheyenne, has been appointed to the state board of medical examiners; Dr. Shingle was formerly a member of the board.

GENERAL

March Automobile Deaths Exceed Last Year's.—In the four weeks ending March 26, automobile accidents were responsible for 441 deaths in seventy-eight large cities in the United States, as compared with 347 during the corresponding period last year. Only five cities did not report automobile fatalities for this period this year, while fifteen reported none in the corresponding period last year.

Another Medical Tour.—Under the direction of Sir Henry Gray, a party of physicians will leave Montreal on the White Star liner *Calgaric*, July 13, for a tour of clinics in leading British cities, and will return to Canada from Liverpool, August 5, on the *Doric*. A day will be spent visiting hospitals in Liverpool, Leeds, Manchester, Birmingham and about a week in London. The party will make side trips to such points of interest as the Shakespeare country, and will return to Montreal by way of the St. Lawrence.

Death of Dr. Power.—Frederick Belding Power, Ph.D., director of the Phytochemical Laboratory of the U. S. Bureau of Chemistry, died at his home in Washington, D. C., March 26, aged 74. Born in New York, Dr. Power received his Ph.D. from the University of Strasbourg in 1880. He was professor of pharmacy and materia medica at the University of Wisconsin, 1883-1892, and director of the Wellcome Research Laboratories, London, England, 1896-1914. He was awarded medals and diplomas of honor in this country and abroad for chemical research. He was a delegate from this country to the congress for unification of the formulas of potent medicaments in Brussels, in 1902; formerly vice president of the Society of Chemical Industry and of the U. S. Pharmacopeial Convention; co-editor of a Manual of Chemical Analysis, and the author of many scientific papers.

Society News.—The American Association of Industrial Physicians and Surgeons will hold its twelfth annual meeting in Baltimore, May 16-17, at the Hotel Belvedere. There will be clinics by members of the staff of Johns Hopkins University Medical Department and the School of Hygiene. Dr. Dean Lewis, among others, will discuss "Shock—Traumatic and Surgical"; Dr. Lewellys F. Barker, Baltimore, "Relations of Trauma to Neuroses," and Dr. William H. Howell, Baltimore, "Carbon Monoxide Poisoning." A special feature will be a trip to the plant of the Bethlehem Steel Company, Tuesday afternoon. All physicians interested are invited.——The Medical Women's National Association will meet in Washington, May 15-17; this organization was founded in 1915, and one of its functions is to provide scholarships for young women studying medicine.

Influenza Subsides in Europe.—The health section of the League of Nations, in reviewing the recent epidemic of influenza in Europe, indicates that the high point was reached when the death rate at Geneva, Switzerland, was 129 influenza deaths per hundred thousand inhabitants between Dec. 5, 1926, and Feb. 12, 1927. The outbreak in London showed a typical old age prevalence; indeed, throughout Europe, chiefly persons beyond middle age succumbed. Germany suffered less than Switzerland and France. In Greece and Bulgaria the malady was widespread but usually in mild form; other countries affected were Denmark, Norway, the Netherlands, Poland, Austria, Italy and Czechoslovakia. The United States escaped the epidemic, the number of cases reported being fewer in the weeks subsequent to January 8 than in the corresponding weeks last year. There was an outbreak of influenza in the interior of China, from Mongolia in the north to Yunnan in the south, last summer, and also in New Zealand, late in July. It is not stated whether this outbreak bore any relation to the general outbreak in Europe later.

National Tuberculosis Association.—The twenty-third annual meeting of this association will be at the Claypool Hotel, Indianapolis, May 23-26, under the presidency of Dr. Henry Sewell. The opening meeting, Monday, will be a general review of the progress in tuberculosis work by Drs. William C. White, Washington, D. C.; Hoyt E. Dear-

holt, Milwaukee; Louis V. Hamman, Baltimore; Alfred Henry, Indianapolis; Ralph C. Matson, Portland, Ore.; Henry F. Vaughan, D.P.H., Detroit, and Mr. Homer Folks, New York. Tuesday, among others, Dr. Aldo Castellani, Tulane University of Louisiana School of Medicine, New Orleans, will discuss "Fungus Diseases of the Lung," and Dr. Evarts A. Graham, Washington University School of Medicine, St. Louis, "Bronchoscopic and Surgical Treatment of Chronic Nontuberculous Suppurative Diseases of the Lung" in the pathologic section. In the clinical section on Monday, Dr. Charles P. Emerson, Indianapolis, will discuss "Teaching of Tuberculosis in Medical Schools," and among others, Dr. Walter L. Rathbun, Cassadaga, N. Y., will speak on "Tracheobronchial Gland Tuberculosis"; Dr. James A. Miller, New York, "Climate in the Treatment of Pulmonary Tuberculosis," and Dr. Eugene L. Opie, Philadelphia, "Latent Tuberculosis in Children." In the sociological section the speakers will include, among others, Miss Grace Abbott of the U. S. Children's Bureau, Washington, D. C.; Dr. William C. Jensen, Cattaraugus County, New York, and Edgar Sydenstricker. There will be a special conference of tuberculosis secretaries of large cities, May 21. The headquarters' office of the National Tuberculosis Association is 370 Seventh Avenue, New York, and the managing director is Dr. Linsly R. Williams.

CANADA

Dr. Parizeau Becomes Director of Studies at Montreal.—Dr. Telesphore Parizeau, professor of clinical surgery at the University of Montreal Faculty and surgeon to Notre Dame Hospital, has been appointed director of studies in the medical faculty and vice dean. The appointment will necessitate Dr. Parizeau giving up his present practice, as well as resigning as surgeon to the hospital. Dr. Parizeau is a native of Montreal.

Clinic of Industrial Medicine.—The McGill Faculty of Medicine, Montreal, will open a clinic for industrial medicine in one of the large hospitals in the city in the near future, and will appoint an expert to take charge. The Metropolitan Life Insurance Company has donated $25,000 to the university to be devoted to the study of medicine and industry. There has been a reorganization of the public health department at McGill recently, and Dr. Albert Grant Fleming has been appointed acting director for one year of the department, which will include preventive medicine and industrial hygiene.

Mental Hygiene Committee.—The Canadian National Committee for Mental Hygiene, since 1918, has directed its attention to the improvement of facilities for the treatment and prevention of mental disability. The *Canadian Medical Association Journal* states that government surveys conducted over a period of five years showed that the mentally disordered were far more numerous than had been expected, and that the facilities for treatment were inadequate. The committee has a research program, which, for three years, has been conducted in cooperation with Canadian universities; sixteen psychiatrists and psychologists are employed now on this basis, the committee paying a part of their salary and the university the remainder. In cooperation with the Rockefeller Foundation and the Laura Spelman Rockefeller Memorial, the committee has sent thirteen Canadians abroad to study mental hygiene at a cost of about $25,000; in addition to that, the committee expends about $50,000 annually on its work.

Child Welfare Publicity in Canada.—The section on child hygiene of the Canadian Council on Child Welfare has taken over the distribution and publication of antenatal letters, for which there is a continuous demand from expectant mothers all over Canada. Two Canadian provinces were publishing letters before this work was taken over by the council; two other provinces requested the council to distribute such letters in their territory, and five other provinces have requested the council to print letters on their own letterheads, for them to distribute; in addition, the council uses the press throughout Canada to broadcast this antenatal service, the letters being approved by recognized authorities, and printed in English and French. There has grown out of the antenatal letters, the *Canadian Medical Association Journal* states, a demand for patterns for layettes; to meet the demand for a form on which to record the records of examination, the council has provided one for the use of physicians in private practice, and another for use in consultations which are in charge of public health nurses only. The council on child welfare has also taken over from the public health association the publication of a set of diet folders, and is publishing posters and pamphlets.

LATIN AMERICA

Hospital News.—The Cuban government has appropriated about 375,000 pesos to reconstruct various hospitals and asylums destroyed by the hurricane in October, 1926.

Nicaraguan Minister a Physician.—The new minister of Nicaragua to the United States, Dr. Alejandro Cesar Chamorro, is a physician and a lawyer. He studied medicine in France, and was for a while professor of anatomy in the Oriente Medical School.

Obligatory Immunization in Mexico.—The president of Mexico recently signed a decree providing that all school children within certain age limits in the government schools should receive the Schick test and the Dick test, and that those showing susceptibility to these diseases be immunized. The school physicians will perform the test and give the treatment.

Railway Ticket Tax for Sanatorium.—The state of Bolivia recently created a tax for the purpose of raising funds to build and maintain a national tuberculosis sanatorium at La Paz. A tax of 10 centavos must be affixed to all railway tickets sold in the republic, and the stamp tax of 1 boliviano shall be attached to passports of persons entering and leaving a country.

Haiti News.—New wards have been constructed in the general hospital at Port-au-Prince, which will accommodate seventy-two patients; a wing is in the process of construction.——The public health service of Haiti will broadcast a series of lectures on public health from Station HHK in Port-au-Prince in the interest of the public.——The Rockefeller Foundation, New York, has granted the request of the public health service of Haiti to award scholarships to a number of young physicians to enable them to do postgraduate work in some large medical centers of the United States and Canada. About eight fellows had been appointed up to March 24. The object is to improve the teaching facilities of the National Medical School.

Porto Rico Items.—The department of health of Porto Rico, together with the department of education and the department of agriculture and labor, has arranged a "Rural Teachers' Institute" to acquaint school teachers with steps that may be taken to solve the health and agricultural problems. The instruction is given by exhibits, demonstrations, visits to clinics or to centers where health campaigns are in progress, and moving pictures and lectures on malaria, tuberculosis, control of bubonic plague, child hygiene and hookworm. Institutes have been held in a number of communities. Dr. Ramón Lavandero is directing this campaign for the department of health, in which more than 1,800 rural school teachers will receive health instruction. The Díaz Garcia clinic has initiated a moving picture show once a week for the patients, at which pictures produced by the department of health on tuberculosis, hookworm and malaria are used to demonstrate methods of prevention; this clinic has opened in San Juan a dispensary for the poor.——The child welfare board of Porto Rico has made a compilation of laws relating to child welfare and is studying them with a view to introducing amendments which would benefit child life. The amendments, which will be presented to the legislature in February, will pertain to delinquency, infant mortality, illegitimacy, and abandonment of minors.

FOREIGN

Congress of Psychotherapy.—The second general medical Congress for Psychotherapy will be held in Bad-Nauheim, April 27-30. Special attention will be given to psychanalysis. Schilder (Vienna), Goldstein (Frankfort-on-the-Main), Binswanger (Kreuzlingen) and Simmel (Berlin) will speak. Among other subjects, the methods employed in psychic treatment of the type of hypnosis and therapeutic pedagogy will be discussed. The congress hopes thus to create a more general interest in methods of psychic treatment.

Deaths in Other Countries

Frederick Armitage Southam, emeritus professor of surgery, Manchester University, formerly honorary surgeon to Manchester Royal Infirmary, March 9, aged 77.——**John Brownlee,** statistician to the Medical Research Council, suddenly, March 21, in London.——Prof. **Wilhelm Uhthoff,** former director of the Ophthalmologic Clinic in Breslau, aged 74.——**Antonio Heverоch,** professor of psychiatry and neurology, Czech University of Prague, aged 57.——**Charles Foix,** professor of neurology at the University of Paris, in March, aged 45.

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 3, 1927.

Radium Lost in a Hospital and Recovered from a Rubbish Heap

Radium valued at $7,500, which disappeared from the operating theater at Charing Cross Hospital, has been found, after a search lasting several days, in a rubbish heap at Harrow. Before reaching Harrow the radium had passed through the destructor fires at the hospital. It was removed from a heap of clinkers by the use of a detector machine, and is said to be none the worse for its adventure. The radium, which, apart from its cost, would be very difficult to replace, had been used in the operating theater, and was kept in two tubes. When the operation was completed the theater was cleansed, but the radium was missing. The hospital was searched and the police authorities informed. Later, a private inquiry agent was called in. He instituted another search of the building, and had the dustbins turned out. He learned that rubbish from the operating theater was burned in the destructor fires at the hospital, and that the refuse was carted away to a dump at Harrow. The assistance of a radium expert from Middlesex Hospital was sought. The expert and the inquiry agent went over to Harrow. The dump and the carts carrying refuse from the hospital were searched with the help of a detector machine, and eventually the radium was recovered. Only a very small quantity was lost.

Chemicals in Flour

The report of the departmental committee on the treatment of flour with chemical substances has been issued by the ministry of health. The committee observes that chemical substances are introduced into flour as bleaching agents and "improvers." The first alter only the appearance of the flour; that is, whiten flour previously of a yellowish or dark tint. It is claimed that the "improvers" enhance the natural baking qualities of the flour by supplementing deficiencies, or correcting conditions which impair its capacity for yielding loaves of the shape, volume, texture and general appearance desired. One of the purposes is said to be to adjust deficiencies in the blends of wheats due to the natural variation in character of different wheats. A further purpose is to produce on newly milled flour the effects of natural aging. One of the claims by the millers for the use of these bleachers and improvers is that it enables them to use any supplies of sound wheat available. The committee does not seriously doubt that "improvers" have been a valuable aid to the home millers in competition with oversea millers.

As to the effect of these chemicals on the health of the consumer, the committee holds that flour should be a product of the milling of wheat without the addition of any foreign substance. But to bring the great bulk of flour sold for bread-making at the present time within that description would interfere with practices not only widely adopted, but claimed with some reasonableness to be necessary unless wheat supplies are to be wasted and flour prices raised. Moreover, so long as a great demand exists for very white breads some form of bleaching process must be permitted. In discussing these chemicals the report states: "Chlorine is capable of altering the composition of gluten in such a way as to affect injuriously its nutritive value. We regard the treatment of such an important foodstuff as flour with a substance such as chlorine, which may alter its composition unfavorably, as undesirable. Our observations on chlorine apply also to nitrogen trichloride. Nitrogen peroxide produces in the flour definite changes. These changes cannot be regarded as being entirely free from objection, but, from the fact that nitrogen peroxide is less reactive than chloride with proteins and fats, and that excessive quantities are not required, it is perhaps permissible to regard its addition to flour less unfavorably than the use of chlorine. It were better that flour should not contain any benzoic acid, which is not necessary, since the results aimed at can be attained sufficiently well in other ways. Persulphates are oxidizing substances, though they do not affect the carotin. They are used as improvers, and on decomposition leave in the flour only a small quantity of mineral matter, and ammonium or potassium sulphate. This, from its nature and small amount, can hardly be regarded as harmful. The other saline improvers, acid calcium phosphate and acid ammonium phosphate, probably affect the composition of the flour but little. Of all the materials used for the treatment of flour the committee regards as least objectionable those which do not produce obvious change in the composition of the flour, and which in the amounts used do not appear to have any deleterious action themselves on the tissues. Acid phosphates are an example.

The committee considers that a staple foodstuff such as flour should be guarded against unnecessary treatment with foreign substances. But it is not prepared, on the knowledge available, to recommend complete elimination of the bleaching agents and improvers. In the first instance it should suffice to limit their use to those which appear least open to objection along the lines indicated. Chlorine, nitrogen trichloride and benzoyl peroxide should not be among these. The committee thinks it should be compulsory for the manufacturers of chemical substances for use either as bleaching agents or improvers or both to declare the nature of the ingredients, and that millers should be required to state whether their flour has undergone a process of chemical bleaching or improving, or both, and if so with what substances and in what proportions. The committee gives in an appendix the list recommended by the National Association of British and Irish Millers of improvers and bleaching agents, and the limits within which each might, in their opinion, be permitted, as follows:

Substance	Amount, Per Cent
Extracts of malt and germ	No limit
Calcium acid phosphate	0.3
Ammonium acid phosphate	0.2
Persulphates	0.04
Chlorine	0.07
Nitrogen peroxide; nitrates as sodium; nitrate in bleached flour	0.0008 (for Irish trade) 0.0006 (for English trade)

Visit of Foreign Health Officers

By arrangement with the health organization of the League of Nations, a visit to Great Britain of health officers from twelve different countries has begun. This is the fifth occasion on which foreign physicians have come here to study British public health services, and similar interchanges have taken place in most European countries, in South and Central America, the United States, Canada, West Africa and Japan. Representatives of Belgium, China, Czechoslovakia, France, Germany, Greece, Italy, Lithuania, Poland, Roumania, Sweden and Jugoslavia are taking part in the present interchange, which will last six weeks. The first week will be spent in London to visit the various institutions of the Metropolitan Asylum Board in connection with the control of infectious diseases, and to study London's water supply and housing schemes. At the end of the week, the health officers will split up into groups to visit ports such as Liverpool and Glasgow, large industrial centers such as Birmingham and Bradford, a representative residential borough adjoining London (Hornsey), and rural areas in Berkshire. The officials will later reassemble in London for the final week, which will include inspection of meat and food markets, port sanitation, and visits to various

institutions in connection with medical research, eugenics, and industrial psychology, tropical, naval and military hygiene, bacteriologic laboratories, and the like. The party will probably leave England, April 2, and meet again in Geneva for the final conference, which includes a brief study of the working of the league, and, in particular, of its health organization. Practically all countries, including the United States, Russia and Turkey, as well as the members of the league, take part in these interchanges, which are attended by about 100 health officers a year, and are carried out with the financial assistance of the Rockefeller Foundation.

The Hunterian Oration

Sir Berkeley Moynihan's reputation as an orator gave rise to great expectations for his hunterian oration, delivered at the Royal College of Surgeons to a crowded and distinguished audience including the Princess Mary, and they were not disappointed. They were, he said, commemorating, on the one hundred and ninety-ninth anniversity of his birth, the services of John Hunter to the science and art of surgery. This year they celebrated also the centenary of the birth of Lister. From all who had ever served the cause of surgery, those two stood apart by reason of the immeasurable benefits they had conferred on their fellow men. In this year, the centenary of Lister, they acclaimed the greatest victory ever won by mankind against their enemies. On his last day as surgeon on the staff of his hospital, Sir Berkeley Moynihan performed six abdominal operations. Not one such operation was performed by any member of the staff in the year in which he became a house surgeon. The diagnosis made in three of the cases before operation, and happily confirmed at the operation, had never, in the whole history of surgery, in those former days been made. How could they understand the attitude of mind of men who spoke as Joseph Bell had spoken when he said that his hospital was a house of death, or as Lister, when he said that hospitals were little better than pest houses. They were at the end of an epoch, undoubtedly the greatest epoch in their history, in which the manipulations of the surgeon had been robbed of the prohibitive dangers which formerly repelled. In lighter vein the president concluded one of the most notable hunterian orations by describing what he imagined would take place in the museum of the college were the spirits of Hunter and Lister to visit their conservator, Sir Arthur Keith. No doubt Sir Arthur Keith would show Hunter the rib of Robert Bruce, the viscera of Napoleon, and the skull of O'Brien, the giant (all of which were exhibited on the table before the president). Sir Arthur Keith would say to Hunter, "You studied the body from crown to heel, but you did not discover how the giant grew." Then he would point to the position of the pituitary gland at the base of the brain, and show him how it influenced growth. When he joined the shades, added the president, the conversation he wished to overhear was the conversation between Lister, Hunter and Sir Arthur Keith.

The Porousness of the Atom

In the first of the course of Gifford lectures at Edinburgh, A. S. Eddington, Plumian professor of astronomy in Cambridge University, discussed "The Nature of the Physical World." He was convinced that a just appreciation of the physical world as it was conceived today carried with it a feeling of open-mindedness toward the deeper significances behind it which might have seemed illogical a generation ago. Between 1905 and 1911, our views of space, time and matter in physics underwent revolutionary change. Comparing the universe as now understood with the universe as conceived before 1905, the most arresting change was not the rearrangement of space and time by Einstein but the new theory of matter originated by Rutherford, by which all that we regarded as most solid was dissolved into tiny specks floating in a void. That had given an abrupt jar to those who had been accustomed to think that things were more or less what they seem. The atom was as porous as the solar system. If we eliminated all waste space and collected the particles that remained into one ball, a man would be reduced to a tiny speck just visible with a magnifying glass. That was not foreshadowed by the atomic theory, or by the electrical theory of matter as originally stated. It was introduced by Rutherford's nucleus theory. A reversion to the old solid type of atom was now unthinkable. Evidently the conception of substance, which played so great a part in our familiar idea of the world and in our philosophy of matter, had become greatly reduced in its domain, and, in fact, physics had found so little scope left for substance that it had abolished the conception altogether.

The Bread Controversy

Whether we should eat white bread or brown seems to have become a perennial subject of controversy. As reported previously, Sir William Arbuthnot Lane, president of the New Health Society, at a social function denounced white bread as "the curse of our civilization." This climax of the attack on white bread, which has been carried on in the press for some years, led the National Association of Millers to send a questionnaire on the subject to 1,000 physicians. The millers were evidently concerned as to whether they might be compelled to alter their plants and methods if the demand for white flour fell off. Eighty-nine per cent of those physicians who replied actually eat white bread; 76 per cent repudiated Lane's statement, and another 10 per cent regarded it as misleading. More than 80 per cent considered white bread a good and nutritious food in a mixed diet, and did not agree that in such circumstances it was likely to lower the standard of national health. In one of his series of articles on health contributed to the *Daily Mail*, Lane, vigorously as usual, attacks these pronouncements. He describes them as "evidence of the sublime ignorance of many members of the medical profession on the subject of food values. To support a trade whose present interests obviously are detrimental to the public, such an attempt to confuse the mind of the country appears to be almost criminal." Against "these quite unscientific opinions," he says, "we have the accumulated intelligence of those who have made dietetics a life study—Gowland Hopkins, Plimmer, Hindhede, McCollum, McCarrison and others."

Smallpox in England

Smallpox continues prevalent in the county of Durham, the West Riding of Yorkshire, and Monmouthshire. In the former two it has engaged the attention of the ministry of health and local authorities for some time past; but the appearance of the disease in the county of Monmouth occurred recently. For the week ended February 19 only one case was notified; the following week the number increased to thirty-five, and for the week ended March 5 there were ninety-five. Throughout England and Wales, for the week ended March 5, the notification of smallpox cases showed an increase of 183 over the number for the week ended February 19. The total was 529, of which 269 were in the county of Durham and 128 in the West Riding of Yorkshire. These two areas and Monmouthshire are the principal centers of the disease, the latest official figures available showing that less than forty cases were notified in other parts of the country. Although the cases are mild, the long continuation of the disease in the North of England is a cause of anxiety at the ministry of health, where it is felt that smallpox of a more virulent type may result. The spread of the infection is attributed largely to the indifference with which the disease is regarded because it is considered to be mild. In the last annual report of the ministry of health it was stated that

in some districts the continued mildness of the prevalent type of smallpox had led to the neglect of vaccination, with a resulting spread of the disease. Although the prevailing type is mild, a number of severe and a few fatal cases occur, and even a mild attack may leave the patient disfigured for life.

PARIS

(From Our Regular Correspondent)

March 23, 1927.

Improvements in the Infirmaries in Algeria

In Algeria there are at present two forms of service: the large civilian hospitals in the cities, and the auxiliary hospitals, or widely scattered infirmaries for the natives. These infirmaries have rendered great service owing to their proximity to native patients and their low fees. Their equipment, however, has been extremely rudimentary, and recently the natives have preferred going to the civilian hospitals in the cities. The expenses of the latter have been thereby much increased, which has had a disturbing effect on Algeria's general budget. The governor general has therefore inquired into the situation. He has found that the organization of the infirmaries is frequently defective, which may account in part for the disaffection of the natives. The food was mediocre and insufficient, patients were sleeping on dirty and nondisinfectible straw-mats, and as the infirmaries came to be abandoned by their clientele, the worse their condition became. The governor general has decided to grant the infirmaries an increased appropriation in order that they may be better equipped. The daily allowance has been increased to seven francs, and the straw-mats will be discarded and army beds substituted. The administrative committees that control these infirmaries must henceforth visit them at least once a week.

Compulsory Smallpox Vaccination

The law of 1902 prescribes, for the "protection of public health," compulsory vaccination during the first year of life, and revaccination between the eleventh and twentieth years. Parents and guardians are responsible for noncompliance with the law. The law of 1915 provides that, in case of an epidemic, revaccination shall be made, by ministerial decree or prefectorial order, compulsory for every one, irrespective of age, who cannot show that he has been successfully vaccinated within five years. Under such exceptional conditions, an opportunity to secure vaccination is provided at all the mayoral offices throughout the infected region, and the population is advised of the fact through posters that reprint applicable sections of the law. Not until recently has there been any actual application of the law. The court of Avranches has sentenced to two days in jail a man who failed to comply with the prefectorial order. The fact was discovered when he came to be admitted to the army. Doubtless the recent slight outbreaks of smallpox have induced the courts henceforth to apply the law more rigorously than has been done in the past.

Against the Closing of Pharmacies on Sunday

Three years ago, Sunday closing of pharmacies was inaugurated by ministerial decree, at the request of the union of pharmacy employees. The pharmacists as well as the general public complain of it. M. Edouard Soulier, a socialist deputy, has recently asked the minister to reverse his decision and cites the case of an accident which occurred Sunday in the suburbs of Paris and which resulted in deaths owing to the impossibility of procuring the necessary pharmaceutic aid for the patients, who were so gravely injured that they could not be transported to the hospital. Up to the present time, the minister, bound by the law, has only been able to promise to increase the number of pharmacies authorized to remain open Sundays. The pharmacists' union claims that pharmacists have the absolute right to open and close their laboratories as they choose, in accordance with regulations established among themselves. A referendum instituted among the pharmacists of Paris resulted in 530 votes for liberty of action and 533 votes for Sunday closing. This is a weak majority when it concerns a matter so important for life and health, and public opinion is beginning to become aroused. Finally, the health commission in the chamber of deputies has taken a definite stand in favor of liberty in the matter and has charged its president, Professor Pinard, deputy of Paris, to intercede with the minister on the subject.

New Doctors of Medicine

During the school year 1925-1926, the French faculties of medicine bestowed 1,246 doctor diplomas in medicine (Paris, 651; Lyons, 166; Bordeaux, 127; Montpellier, 113; Lille, 41; Toulouse, 40; Nancy, 33; Strasbourg, 30; Algiers, 30; Beirut, 11). Among this number there were 110 diplomas conferred on foreigners, which do not give the right to practice medicine in France; of the latter more than half were bestowed in Paris.

The minister of public instruction announced that on July 31, 1926, there were 10,821 students in the various French faculties of medicine, and 1,465 in the provincial secondary schools. In 1913, the corresponding figures were 8,247 and 1,497. The secondary preparatory schools have not grown as rapidly, it is evident, as have the faculties of medicine, which is rather regrettable, for these preparatory schools relieve congestion in the large university centers, and the pupils who take the first four years of their course in them receive, in a more restricted environment and with closer personal relationships, a much better clinical professional education.

BELGIUM

(From Our Regular Correspondent)

Dec. 30, 1927.

An Ocular Autograft

At a recent meeting of the Société d'ophtalmologie, Dr. Weeckers presented the results of his experimental and clinical observations on the subject of autografts of the eyeball. Following the traumatic avulsion of the eye of a workman, the eyeball, returned to its orbit after rupture of all its anatomic connections, preserved its external form, although the deep coats became completely disorganized. The success of this unusual attempt at eye grafting in man suggested to the author the idea of using eyeballs which must be enucleated because of pain that they occasion. He performed an intervention that consisted in a genuine autograft operation. The eye detached from all its connections was buried under the conjunctiva, which was sutured over it. After operative recovery, there persisted a stump—movable and painless—to which the prosthesis was applied.

The Crusade Against Rheumatism

The Société belge de physiothérapie will establish in Belgium a branch of the international society for the combating of rheumatism, the seat of which is at Amsterdam. The president is Dr. L. Dekeyser, and the secretary Dr. Dubois-Trepagne.

A Committee for the Promotion of International Comity Among Scientists

A committee for the promotion of comity between Spanish and Belgian scientists has been created. The idea was welcomed in both countries. Two eminent scientists of today, Profs. Ramon y Cajal of Madrid and Jules Bordet of Brussels, have accepted the presidency of the committee. The purpose is to promote scientific relations between Belgian and Spanish

scientists by establishing the interchange of professors, by the creation of scholarships, by medical study tours, and by the multiplication of exchanges between periodicals. A Belgian medical study tour in Spain will take place during the coming Easter vacation.

Roentgen Rays and Suprarenalinemia

The results of research have been presented to the Academy of Medicine by Zunz and La Barre on the biologic effects that follow from the application of roentgen rays and radium, and particularly as regards coagulability, calcemia and glycemia. By utilizing various technics for transfusion and anastomosis, the authors have proved that roentgen rays produce a marked and prolonged hypersuprarenalinemia. Their researches show that variations in the blood caused by roentgen rays are in direct relation to the increase in epinephrine in the blood stream.

Completion of the Hospital Ship for the Congo Region

Some time ago, reference was made to the proposed construction of a hospital ship for the Congo region. The ship has been completed and has been christened the *Belgium*. It has a length of 32 meters, a breadth of 7.5 meters, and a draft of 75 cm. It has a flat keel adapted for river navigation, as it will ply between ports on the Congo and will render aid, in response to wireless calls, to isolated posts along the river. If an epidemic breaks out at a given point, it is possible to transport within a few hours, or within a few days at most, its physician and nursing personnel, its operating rooms and its pharmacy, with their modern equipment.

Personal

Dr. Phaneuf of Boston has been appointed foreign corresponding member of the Société belge de gynécologie et obstétrique.

The Specific Reaction of Malignant Tumors

Reding and Slosse have reported to the Société belge de biologie their observation that an intravenous injection of pituitary extract frequently incites a sharp painful reaction in neoplasms. Cancers that have become inactive following irradiations are always refractory. The reaction may be specific for a malignant tissue.

The Lecture by Dr. Benedict

Dr. E. B. Benedict of Boston gave recently, at the physiologic institute of the Faculté de médecine de Bruxelles, an exposition of the researches of his laboratory on basal metabolism.

Pneumococcal Ophthalmia

Addressing the Société belge d'ophtalmologie, Dr. Weeckers said that during the winter of 1925-1926 the pneumococcus was particularly virulent, more especially in children. The result was numerous grave cases of pneumonia, well authenticated cases of pneumococcemia, and exceptional complications such as metastatic ophthalmia. In this connection, Dr. Terson stated that, two years previously, he had observed a case in which, following an ordinary case of influenza, there had occurred metastasis, with atrophy of the eyeballs. The complication was not associated with pain, and took the form of a retinohyalitis, being a veritable inoculation of the vitreous body.

Treatment of Tuberculous Cystitis

Before the Société belge d'urologie, Dr. Boisson recently described his excellent results secured in tuberculous cystitis by injecting into the bladder a solution of methylene blue, after the method recommended by Blanc. The treatment is prolonged, and cure cannot be anticipated if there is a renal focus or if a renal focus has not been eliminated by nephrectomy.

BERLIN

(From Our Regular Correspondent)

March 26, 1927.

Treatment of the Tuberculous in Mountain Regions and in the Lowlands

In discussing the relative value of mountains and lowlands as a place of abode for the tuberculous, Dr. Ulrici, the medical director of the Berlin Tuberculosis Hospital in Beetz-Sommerfeld, took a stand against overestimation of the value of mountain climate. He is of the opinion that climate is of secondary importance. The essential factors are fresh air and proper diet. The lowlands offer in summer a climate that is mild or conservative and in winter a rigorous climate that is bracing. For the average member of a health insurance society, the exchange of poor quarters for the peaceful surroundings and the comfort of a German sanatorium is an important psychic factor. There are many cases in which mountain regions are contraindicated, including heart patients and patients with exophthalmic goiter. Such patients sleep in elevated regions either too much or not at all, nervous disturbances being prone to develop. The question is not so much as to what patients will benefit from a sojourn in the mountains as it is for what patients such sojourn is indispensable.

The second speaker, Dr. Peters, director of the German sanatorium in Davos-Wolfgang, expressed the conviction that there were cases in which only the mountain climate could help. To be sure, every patient did not need to be packed off at once to the high mountain regions; many would be benefited by such elevations as would be found in the Harz region or in the Black Forest. The statistics of the sanatorium conducted by Dr. Peters show the value of the Davos region. In 1924, 47 per cent of the patients were dismissed fully capable of taking up their work; of these, three fourths (or 36 per cent of the original number) have remained able to carry on. These results were secured in patients in the tertiary stage. But Dr. Peters does not regard the high mountain climate as infallible. It is difficult to say just what patients must be sent to the high mountain regions. Patients who can easily afford the expense would do well to go to the high mountain regions at once. Members of the health insurance societies, who must avoid such expense if possible, and who within two years after a course of treatment again become unable to work, or who, after three months' treatment, do not show distinct improvement, should by all means be sent to high mountain areas.

Professor Brauer of Hamburg took a midway position. He is convinced that change of climate has an effect on the patient. He admitted that the scientific investigation of the effects of climate had not yet been completed; far-reaching researches are still needed.

Excess of Births over Deaths in Hamburg

In 1925 the general birth rate in Germany ceased to show a decrease. The total number of births in Germany in 1925 was 1,334,311, or an increase of 23,267 births (1.8 per cent) over the previous year. The total number of deaths was 787,895, or 14,281 (1.8 per cent) less than in 1924. Corresponding to the increase of births, on the one hand, and the reduction of mortality, on the other hand, there was an increase in the excess of births over deaths.

Medical Films

As the result of a suggested need in medical circles, Graf Arco, the well known investigator in the field of wireless telephony, has constructed an apparatus which makes it possible, by means of a loud speaker, to give an audience an explanatory account of a film. The apparatus was first used before a large medical audience gathered in the Kaiserin-

Friedrich-Haus für das ärztliche Fortbildungswesen. By means of the Carolus regulatory mechanism, two films were run off synchronously. The projecting apparatus was connected by a shaft with a synchronometer of the radio apparatus. The same film, which was likewise connected with the same kind of synchronometer, was located in the "Vox-Haus," the central station of the Berlin radio corporation. In this manner, the operation for congenital luxation of the hip, the genesis of uric acid crystals, the stages of sleeping sickness, the work of the nursing personnel, and the action of the heart (elucidated by Geheimrat Kraus), were presented to the listeners and the spectators through word and picture by the central radio bureau. While some inaccuracy in the mutual adjustment of the film and the loud speaker was still noticeable, the new apparatus constitutes an important advance in the method of instruction by means of films.

NETHERLANDS

(From Our Regular Correspondent)

March 9, 1927.

Postvaccinal Encephalitis

Reference has been made to certain untoward incidents that occasionally occur following smallpox vaccination. The discussion of this question is reopened because of an account of the researches of Bastiaanse, Bijl and Terburgh that recently appeared in the *Nederlandsch Tijdschrift voor Geneeskunde*. The study is based on thirty-five cases of postvaccinal encephalitis observed between Jan. 1 and July 1, 1925. These cases developed from ten to thirteen days after vaccination, and fifteen, or 43 per cent, proved fatal. The cases occurred, in the main, in small places, often adjacent to one another, and, in some instances, more than one case in one commune. Most of the cases were notified in March, in which month the epidemic was more widespread than in the other months of the year. The vaccine that was used to vaccinate the children who developed encephalomyelitis came from three different establishments and had been derived from twelve different calves. The authors were unable to isolate any infective organism from the cerebrospinal fluid of the children affected, either during life or after death. From their data they conclude that it cannot be denied that there is a relation between vaccination and postvaccinal encephalomyelitis. The encephalitis is probably due to an ultravirus. It is not probable that postvaccinal encephalitis is due to the direct and sole action of the vaccinal lymph, and there must be an unknown etiologic factor. It seems likely that the vaccination caused an activation of a latent virus. The assumption that such virus is the virus of epidemic encephalitis or a very similar virus would give the most plausible explanation of the clinical and histologic symptoms and the epidemiologic facts.

The After-Treatment in Tuberculosis

The Nederlandsch Vereeniging tot Bestrijding der Tuberculose has created a permanent committee, under the chairmanship of Mr. Roodenburg, the object of which is the study of the problem of postsanatorial treatment in tuberculosis.

The Plague in Java

Mention has been made of the strenuous efforts put forth in Java to combat the plague. The good results secured are a guarantee of the value of the method and of the efficiency of the administration that employs it. The work is beginning to attract attention in foreign countries. According to an article in the *British Medical Journal*, Balfour recently spoke in praise of the organization of the campaign in the Dutch East Indies. The health section of the League of Nations likewise has published a report on the evolution of the plague in Java during the period from 1911 to 1926. It gives a graph showing in monthly periods the number of deaths due to the plague. It may be noted that, while there are some years in which there were scarcely any deaths (1916 to 1919, for example), there are other years (1924 and 1925) in which the total number of deaths in a month exceeded 3,000 (February, 1925). During the first eight months of 1926, 4,000 deaths were recorded.

The Sixth International Congress of the History of Medicine

The International Society of the History of Medicine holds its congress every two years. The next session will convene at Leyden and Amsterdam, July 18-23, 1927. The meetings will be held in the lecture rooms of the universities. In the communal museum at Amsterdam there will be an exhibit of paintings and old books dealing with anatomy and medicine. The general secretary is Dr. J. E. Kroon, Stationweg 25, Leyden.

Radiotherapy in Tuberculosis of the Larynx

At the meeting of the Netherlands otorhinolaryngologic society, Dr. Van Iterson reported the good results that he has secured in the treatment of laryngeal tuberculosis by means of radiotherapy. The results were especially noteworthy in the granulation forms. In the last twenty-five cases cited he effected six cures and marked improvement in nine cases, some of which appeared almost hopeless.

The Law Pertaining to Mental Diseases

Reference has been made in previous letters to various attempts to bring about a new law pertaining to mental diseases. The public health service and the Netherlands psychiatric and neurologic society have rendered conflicting reports, and it is difficult to harmonize the two points of view so as to incorporate them in a single law. Dr. Schuurmans-Stockhoven, inspector of psychopathic hospitals, has published a booklet in which he calls attention to the modifications that might even now be made in the present law. He recommends the creation of observation centers where mental patients might be admitted for treatment before being finally sent to a psychopathic hospital, which is an unfavorable event in the record of any individual.

A Lack That Needs Remedying

A large daily, the *Telegraaf*, has recently called the attention of the authorities to the fact that at certain hours of the day it is impossible to obtain prompt medical treatment. This applies paricularly to the hours when physicians are making their calls. An emergency drug service already exists, and the suggestion is given that physicians provide in a similar manner for an emergency medical service.

Installation of Dr. Voorhoeve

Dr. Voorhoeve, who was recently appointed professor of radiology at the University of Amsterdam, has given his introductory lecture. His subject was "Radiology in Medicine: Theory and Practice."

The Law Pertaining to Serums and Vaccines

The minister of labor and public health has introduced a bill pertaining to serums and vaccines, which provides that no one may prepare these products without written ministerial authorization. The sale, the conservation, the dispensing and the supervision of the quality of serums and vaccines will be governed by general measures. Autovaccines, as they are not of a general character, will not be subject to regulation.

Creation of a Colonial Institute

The Colonial Institute, the health section of which has been placed in charge of Dr. Van Loghem, has been established in Amsterdam.

Marriages

JOHN PIERCE ROBERTS, Shenandoah, Pa., to Miss Margaret V. Collins of Mahanoy City, February 26.

NATHAN SMILIE to Miss Marion R. Woltemate, both of Philadelphia, at New York, February 10.

MILBURN WATTS KEMP, Newberry, Mich., to Miss Elizabeth Slote of Kalamazoo, recently.

DANIEL H. BESSESEN to Miss Swanhild C. Arnesen, both of Minneapolis, in March.

Deaths

John Ferguson Brown ✦ St. Louis; Milwaukee Medical College, 1901; member of the State Medical Society of Wisconsin; past president of the Dodge County (Wis.) Medical Society; formerly superintendent of the Central State Hospital for Insane, Waupun, the School for the Blind, Janesville, the School for Dependent Children, Sparta; for seven years physician for the state prison; at one time mayor of Sparta; aged 63; died suddenly, March 22.

Milton Bixler Hartzell, Fayetteville, Pa.; Jefferson Medical College of Philadelphia, 1877; emeritus professor of dermatology, University of Pennsylvania School of Medicine, Philadelphia; and formerly clinical professor of dermatology, Woman's Medical College of Pennsylvania; past president of the American Dermatological Association; at one time on the staffs of the American Oncologic and Philadelphia hospitals; aged 72; died, April 7.

Lewis Curn Cline, Indianapolis; Jefferson Medical College of Philadelphia, 1879; formerly professor of otology, laryngology and rhinology, Indiana University School of Medicine; past president of the Marion County Medical Society; formerly on the staffs of the Indianapolis City and St. Vincent's hospitals; at one time member of the city board of health; aged 75; died, March 28, at the Flagler Hospital, St. Augustine, Fla., of asthma.

Carl Lewis Barnes ✦ Chicago; Medical College of Indiana, Indianapolis, 1892; formerly professor of public health, Hahnemann Medical College and Hospital, Chicago; professor of anatomy and surgery, College of Physicians and Surgeons, Indianapolis, 1893-1895; served during the World War; on the staffs of the Chicago General, Jackson Park and Rogers Park hospitals; aged 54; died, April 5, of cerebral hemorrhage and pneumonia.

Alpha Eugene Rockey ✦ Portland, Ore.; Hahnemann Medical College and Hospital, Chicago, 1878; Rush Medical College, Chicago, 1891; clinician in surgery, University of Oregon Medical School, Portland; past president of the Oregon State Medical Association; on the staffs of the Good Samaritan and Multnomah hospitals; served during the World War; aged 69; died, March 28, of cerebral hemorrhage.

McDurham D. Taylor, Aztec, N. M.; Kentucky School of Medicine, Louisville, 1894; member of the Colorado State Medical Society and the New Mexico Medical Society; formerly member of the state board of medical examiners and board of education; for sixteen years county health officer; member of the state legislature; aged 59; died, March 16, at Santa Fe, of pneumonia.

Edmund Moss ✦ New Orleans; Medical Department of the Tulane University of Louisiana, New Orleans, 1899; assistant professor of clinical medicine at his alma mater and associate professor of pediatrics, New Orleans Polyclinic; medical director of the public school of Orleans Parish; aged 54; died, March 22, of myocarditis.

Henry Clay Eschbach ✦ Albia, Iowa; University of Pennsylvania School of Medicine, Philadelphia, 1883; past president of the Monroe County Medical Society, and the Iowa State Medical Society; formerly member of the state board of health; on the staff of the Miner's Hospital; aged 70; died, March 25, of carcinoma of the liver.

Oscar Herman Urstad ✦ East Stanwood, Wash.; Central College of Physicians and Surgeons, Indianapolis, 1900; formerly proprietor of a hospital in Kiester, Minn., bearing his name; at one time on the staff of the Swedish Hospital, Minneapolis; served during the World War; aged 56; died, March 26, of angina pectoris.

Dana Oliver Weeks, Marion, Ohio; Columbus Medical College, 1892; member of the Ohio State Medical Association, and the Associated Anesthetists of the United States and Canada; aged 60; on the staff of the Marion City Hospital, where he died, March 14, of carcinoma of the liver and stomach.

Estelle H. Henderson, Marion, Va.; University College of Medicine, Richmond, 1898; member of the Medical Society of Virginia; and the American Psychiatric Association; medical superintendent of the Southwestern State Hospital; aged 55; died, February 25, of heart disease.

Ladislas Lazaro, Washington, La.; Louisville (Ky.) Medical College, 1894; congressman; member of the state legislature; for four years president of the parish board of education; aged 54; died, March 30, at the Garfield Hospital, Washington, D. C., of inguinal hernia.

Wilhelmina T. Meader Nelson, Palmyra, N. J.; Woman's Medical College of Pennsylvania, Philadelphia, 1891; member of the Medical Society of the State of Pennsylvania; formerly physician at the County Prison, Philadelphia; aged 78; died, March 20, of heart disease.

Daniel E. Beltz, Ligonier, Pa.; Philadelphia University of Medicine and Surgery, 1865; member of the Medical Society of the State of Pennsylvania; Civil War veteran; president of the First National Bank of Ligonier; aged 91; died suddenly, March 6, of heart disease.

Samuel James Torney, Bellingham, Wash.; College of Physicians and Surgeons, Chicago, 1900; member of the Washington State Medical Association, and the Pacific Coast Oto-Ophthalmological Society; aged 60; died, March 17, of endocarditis.

John Dixon Yost ✦ Major, U. S. Army, retired, San Francisco; Medical School of Harvard University, Boston, 1898; was commissioned as first lieutenant assistant surgeon in 1898, and was retired for disability in line of duty in 1909; aged 56; died recently.

Joseph Markey Grace ✦ Omaha, Neb.; Creighton Medical College, Omaha, 1924; member of the Iowa State Medical Society; aged 27; died recently, on the Balearic Islands en route to the United Tubercular Sanitarium at Bagalore, India.

William Henry Miner ✦ Danville, Ill.; University of Illinois College of Medicine, Chicago, 1914; formerly on the staff of the Wabash Hospital, Decatur; aged 34; died, March 20, of septicemia, following streptococcic sore throat.

Adelma George Patton ✦ Monmouth, Ill.; Miami Medical College, Cincinnati, 1892; past president of the Warren County Medical Society; member of the Radiological Society of North America; aged 57; died, March 29, of pneumonia.

Max Eugene Wonders ✦ San Diego, Calif.; University of Nebraska College of Medicine, Omaha, 1924; assistant surgeon, lieutenant, junior grade, U. S. Navy; aged 29; died, March 20, of injuries received in an automobile accident.

Joseph Edgar Johnson, Gandy, La.; Medical Department of Tulane University of Louisiana, New Orleans, 1912; member of the State Medical Association of Texas; aged 49; died, Nov. 11, 1926, at Houston, Texas, of acute appendicitis.

John Thomas Horton, Quanah, Texas; Hospital College of Medicine, Louisville, 1891; member of the State Medical Association of Texas; aged 69; died, February 7, as the result of injuries received in an automobile accident.

Nelson Merwin Wood ✦ Boston; Boston University School of Medicine, 1893; professor of medicine at his alma mater; on the staff of the Massachusetts Homeopathic Hospital; aged 60; died, March 13, of cirrhosis of the liver.

Walter Allen McEachern, Superior, Wis.; University of Illinois College of Medicine, Chicago, 1904; superintendent of the Isolation Hospital; served during the World War; aged 53; died, March 31, of cerebral hemorrhage.

Vernon Edmund Taylor, Brooklyn; Long Island College Hospital, Brooklyn, 1896; member of the Medical Society of the State of New York; on the staff of the Swedish Hospital; aged 56; died, March 24, of heart disease.

John H. Robinson, Jr., Newport News, Va.; Howard University School of Medicine, Washington, D. C., 1914; on the staff of the Whittaker Hospital; aged 38; died, March 26, at Hampton, of pulmonary tuberculosis.

James Alfred Adams, Alma, Okla.; University of Louisville (Ky.) School of Medicine, 1883; member of the Oklahoma State Medical Association; aged 69; died, in March, at Duncan, of influenza and pneumonia.

William A. De Watteville, New York; F.R.C.S., Edinburgh, Scotland, 1882; member of the Medical Society of the State of New York; aged 72; died, March 26, at the Lenox Hill Hospital, of acute nephritis.

Allen William Gray, Chicago; Chicago Medical College, 1868; member of the Illinois State Medical Society; Civil War veteran; aged 87; died, March 23, of carcinoma of the prostate, uremia and diabetes.

Custer B. Manning, Lovett, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1908; aged 46; died, March 6, at the Claxton-Montford Hospital, Dublin, of uremia and chronic nephritis.

Theodore Lafayette Ginn, Goldsboro, N. C.; Medical College of Virginia, Richmond, 1901; member of the Medical Society of the State of North Carolina; aged 47; died, March 21, of cerebral hemorrhage.

Carl Vernon Guffey, McKeesport, Pa.; University of Pittsburgh School of Medicine, 1924; member of the Medical Society of the State of Pennsylvania; aged 28; died, March 20, of lobar pneumonia.

Clancy Montague Jackson, Jacksonville, Fla.; St. Louis University School of Medicine, 1923; member of the Florida Medical Association; aged 34; was killed, March 11, by an unknown assailant.

Joseph William B. Flageolle, Sioux City, Iowa; Sioux City College of Medicine, 1909; served during the World War; aged 38; died, March 3, at St. Vincent's Hospital, of gastric hemorrhage.

William Schroeder, Brooklyn; Long Island College Hospital, Brooklyn, 1881; member of the Medical Society of the State of New York; aged 72; died, March 29, of chronic myocarditis.

Albert Franklin Blaisdell, Winchester, Mass.; Medical School of Harvard University, Boston, 1879; aged 79; died, March 17, at the Corey Hill Hospital, Brookline, of cerebral thrombosis.

Charles Franklin Congdon, Mystic, Conn.; College of Physicians and Surgeons, Buffalo, 1883; aged 70; died, February 12, of primary anemia probably due to carcinoma of the pyloris.

Arthur Phinney Calhoun ✠ Seattle; Cooper Medical College, San Francisco, 1905; served during the World War; aged 49; died, January 30, at the Columbus Hospital, of pneumonia.

John H. Funk, Boyertown, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1865; formerly a druggist, and a member of the school board; aged 83; died, March 29, of anemia.

John Campbell Young, Detroit; Western Reserve University School of Medicine, Cleveland, 1916; served during the World War; aged 39; died, March 20, of lymphatic leukemia.

Charles Edwin Ferree, Wayne City, Ill.; Physio-Medical College of Indiana, Indianapolis, 1905; formerly professor of anatomy at his alma mater; aged 66; died, March 17, of acute nephritis.

Zoro Knox Justice ✠ Davidson, N. C.; North Carolina Medical College, Charlotte, 1903; also a dentist; aged 54; was accidentally shot and killed in February, near Hendersonville.

Barclay O. White ✠ Wolcottville, Ind.; Kentucky School of Medicine, Louisville, 1902; past president of the Noble County Medical Society; aged 53; died, March 22, of heart disease.

James William Livesay ✠ Mount Clare, W. Va.; College of Physicians and Surgeons, Baltimore, 1913; aged 42; died, March 19, at St. Mary's Hospital, Clarksburg, of heart disease.

Niel Anderson ✠ Chicago; Chicago Homeopathic Medical College, 1896; Rush Medical College, Chicago, 1899; aged 59; died, March 24, following an operation for brain tumor.

Samuel P. McCrea, Shelbyville, Ind.; Rush Medical College, Chicago, 1868; president of the Farmers National Bank of Shelbyville; also a druggist; aged 82; died, January 17.

A. O. Faulkner, Lincoln, Neb.; Hahnemann Medical College and Hospital, Chicago, 1883; aged 68; died, February 8, of coronary sclerosis and myocardial degeneration.

Walter Richard Riddell, Norwood Grove, Man., Canada; University of Manitoba Faculty of Medicine, Winnipeg, 1906; aged 45; died, February 24, at Winnipeg.

Thomas Myers Jewell, Mindora, Wis.; Rush Medical College, Chicago, 1895; aged 65; died, March 27, at the Lutheran Hospital, La Crosse, of cerebral hemorrhage.

Frank Herbert Jordan, New Bedford, Mass.; Medical School of Maine, Portland, 1899; aged 58; died, March 21, of heart disease and interstitial nephritis.

Jean Turner Zimmermann, Chicago; College of Physicians and Surgeons, Keokuk, 1897; aged 55; died, January 20, at Toledo, Ohio, of cerebral hemorrhage.

Alfred Farncomb, Newcastle, Ont., Canada; Trinity Medical College, Toronto, 1884; L.R.C.P., Edinburgh, Scotland, 1884; aged 66; died, February 22.

Thomas Goodwin Gauntt ✠ West Point, Ga.; College of Physicians and Surgeons, Memphis, 1908; aged 44; died, March 27, of Landry's paralysis.

Charles Edward Hecht, Brooklyn; University and Bellevue Hospital Medical College, New York, 1900; aged 52; died, March 18, of chronic myocarditis.

Moses Eisenstaedt ✠ Chicago; Northwestern University Medical School, Chicago, 1902; also a dentist; aged 47; died, February 26, of septicemia.

Victor C. Roberts, Highland Park, Pa.; Medico-Chirurgical College of Philadelphia, 1892; aged 68; died, February 17, of carcinoma of the stomach.

James Russell McRae, Winnipeg, Man., Canada; University of Manitoba Faculty of Medicine, Winnipeg, 1896; aged 59; died, February 7.

Robert H. McCarty, Jr., Philadelphia; Hahnemann Medical College and Hospital of Philadelphia, 1897; aged 56; died, April 1, of heart disease.

R. Henry Milan, Lexington, Tenn. (licensed, Tennessee, 1911); member of the Tennessee State Medical Association; aged 55; died, in March.

William H. Van Meer, Longton, Kan.; Kansas City Homeopathic Medical College, 1890; aged 72; died, February 7, of carcinoma of the rectum.

T. D. Bryan, Fulton, Ky.; Vanderbilt University Medical Department, Nashville, 1881; aged 74; died, March 25, of a carbuncle on the neck.

Furtunato Bottista Sirianni, Greenville, Miss.; University of Naples, Italy, 1898; served during the World War; aged 52; died, March 1.

Nickolas E. Wilson, Corydon, Iowa; College of Physicians and Surgeons, Keokuk, 1881; aged 78; died, February 11, of pernicious anemia.

Eugene Ferris Beard ✠ Lexington, Ky.; University of Louisville School of Medicine, 1876; aged 74; died, March 21, of heart disease.

Henry H. Freund ✠ Philadelphia; Jefferson Medical College of Philadelphia, 1880; aged 69; died, March 26, of arteriosclerosis.

Charles M. Lukens, Gnadenhutten, Ohio; Pulte Medical College, Cincinnati, 1879; aged 79; died, January 12, of heart disease.

Ofard Francis May ✠ El Paso, Texas; Chicago College of Medicine and Surgery, 1909; aged 45; died, March 16, of tuberculosis.

George A. Wood, Earlysville, Va.; Medical College of Virginia, Richmond, 1867; aged 91; died, in January, of cerebral hemorrhage.

John Mellor ✠ Philadelphia; Medico-Chirurgical College of Philadelphia, 1895; aged 57; died, April 6, of hypernephroma.

Ephraim J. Buck, Capac, Mich.; Michigan College of Medicine and Surgery, 1895; aged 56; died, March 17, of angina pectoris.

John W. Bilderback, New Haven, Ind. (licensed, Indiana, 1897); Civil War veteran; aged 82; died, March 29, of senility.

K. S. Piatt, Chillicothe, Mo.; Medical College of Ohio, Cincinnati, 1891; aged 62; died, March 29, at Rochester, Minn.

Henry M. Hall, Lincoln, Kansas; College of Physicians and Surgeons, Keokuk, 1858; aged 91; died, March 17, of senility.

Armin Sicherman ✠ Akron, Ohio; University of Vienna, Austria, 1890; aged 63; died, April 2, of lung abscess.

Samuel Falk, New York; Baltimore University School of Medicine, 1898; aged 55; died, March 17.

Edwin David Sessions, Fennville, Mich. (licensed, Michigan, 1901); aged 72; died, March 15.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

THE CREOCO REMEDY COMPANY

A Quack Attempts to Evade a Fraud Order

D. H. Brown, M.D., of Jacksonville and St. Augustine, Fla., is a negro quack who for years has been swindling consumptives. Brown was born in 1868, received a diploma from the Meharry Medical College of Nashville, Tenn., in 1898, and obtained a Florida license in 1899. This man's particular piece of quackery has in the past gone under the name "Dr. Brown's New Consumption Remedy" and he made his appeal especially to those unfortunate members of his own race who were afflicted with tuberculosis.

More than ten years ago (in November, 1916) Brown was prosecuted under the federal Food and Drugs Act because he was crude enough to make claims on the trade package of his nostrum to the effect that it was a remedy for consumption, pneumonia, and all diseases of the lungs. These claims being false and fraudulent, the officials who enforce the Food and Drugs Act proceeded against him, and in December, 1917, Brown pleaded guilty and was fined a trivial $50 and costs. The government's report on this case was issued in August, 1918, and was abstracted in this department of THE JOURNAL, Feb. 22, 1919.

After his conflict with the national Food and Drugs Act, Brown ceased making false and fraudulent claims on the trade package, but continued to sell his worthless nostrum, making the same false and fraudulent claims in newspaper advertisements and circulars, neither of which, unfortunately, is covered by the Food and Drugs Act.

In October, 1922, however, the Post Office Department filed charges against Brown and he was called on to show cause on or before Nov. 9, 1922, why a fraud order should not be issued against his concern, then known as the Magnolia Remedy Company. Brown, through his attorney, got a postponement from November 9 to November 23, at which time Brown's attorney appeared at Washington and declared that his client would be perfectly willing to eliminate the objectionable features of his business. The government stated that if Brown would cease making claims for his preparation to the effect that it would cure consumption, and would merely represent that it had expectorant and alterative value in the treatment of colds and coughs, the case might be disposed of without the issuance of a fraud order. The hearing was therefore adjourned in order that Brown might submit revised literature on or before Dec. 11, 1922. Brown again asked for an extension of time, and two postponements were made to Jan. 24, 1923. On this date the matter came up for a hearing and Brown, through his attorney, offered the usual batch of testimonials and declared that his nostrum consisted principally of a compound of creosote, Donovan's solution and extract of malt. The federal chemists showed that there was neither arsenic nor mercury (both present in Donovan's solution) in Brown's product. On Feb. 2, 1923, a fraud order was issued against D. H. Brown and also against the Magnolia Remedy Company. The matter was dealt with in THE JOURNAL, Feb. 17, 1923. Now comes a report from the Post Office Department which shows that this quack has been attempting to renew his fraudulent business. After the fraud order had been in effect almost a year, Brown filed in the United States District Court for the Southern District of Florida a bill for injunction against the postmaster at Jacksonville, in which he sought to restrain the enforcement of the fraud order. After a hearing, Judge Clayton in that court denied the application for an injunction.

In September, 1926, Brown filed with the Post Office authorities an affidavit in which he declared that the scheme against which a fraud order was aimed, namely, the sale through the mails of a medicine for the alleged cure of consumption, had been absolutely discontinued and abandoned, and Brown swore that he would not engage in any similar scheme at any time in the future. This affidavit was filed by Brown in an endeavor to have the fraud order revoked so far as it affected his personal name. An investigation was made to see whether the statements in the affidavit were true, and it was soon found that the affidavit was false, the facts being that Brown had created a new company, the Creoco Remedy Company, and was selling the same preparation under the name of this company that he had previously sold under the name Magnolia Remedy Company. The "Dr. Brown's New Consumption Remedy" had become "Creoco." Moreover, he had circularized former patrons of the Magnolia Remedy Company and employed in his literature testimonials originally given to the Magnolia Remedy Company, the testimonials being so changed as to make it appear that they were sent to the Creoco Remedy Company. One of the testimonials published by Brown in his Creoco advertising was from a Mrs. S. C. J. Bryant of Atlanta, Ga. Although published in 1926 under the heading "Snatched from the Grave," the facts were that the woman who gave the testimonial had been in her grave several years, having died of pneumonia in January, 1920.

On March 29, 1927, Judge Horace J. Donnelly, Solicitor for the Post Office Department, recommended that a supplemental fraud order be issued against the Creoco Remedy Company, and on March 30, 1927, the order was issued.

Correspondence

"THE NEED OF TEACHING MEDICAL ETHICS"

To the Editor:—At the Annual Congress on Medical Education, February 14, in an address on "The Need of Teaching Medical Ethics," printed in THE JOURNAL, February 26, Dr. Arthur Dean Bevan, the chairman, says:

> This problem [the prescribing of alcohol] has become a serious one because, in the propaganda against prohibition, a well organized group in the profession, in spite of the liberality of the government in regard to the amount of whisky which the medical man can prescribe for patients, has taken the position that the amount should not be limited and the physician should be permitted to prescribe any amount which he deems necessary.

And then Dr. Bevan asks, *"Is this not a case for the application of sound medical ethics?"*

This, without much attempt at concealment, is apparently aimed against the Association for the Protection of Constitutional Rights and those associated in the effort to have declared unconstitutional section 7 of the Volstead Act, which prohibits the physician from prescribing to a patient—no matter how serious the ailment or what the trained judgment of the physician feels is needful for the patient—more than a pint of intoxicating liquor in any ten days. Even though the patient may be in need of a larger dosage not merely for the alleviation of pain but for the prolongation or even saving of life, there is no exception. The prohibition is absolute.

In view of the facts that follow—unless the author was wholly without knowledge of them—it may not be improper to ask whether it is not a case for "the application of sound professional ethics" that he has seen fit to condemn a proceeding as that only of the above Association, whereas it is in complete accord with the views of the American Medical Association itself.

For in 1924 the following resolution was adopted by the House of Delegates of the American Medical Association:

> *Resolved*, That the House of Delegates of the American Medical Association expresses its disapproval of those portions of the National Prohibition Acts which interfere with the proper relation between the physician and his patient in prescribing alcohol medicinally; be it further
>
> *Resolved*, That the House of Delegates of the American Medical Association instruct the Board of Trustees to use its best endeavor to have repealed such sections of the National Prohibition Acts as are in conflict

with the above resolution and also use their best endeavor to have the Commissioner of Internal Revenue and the Prohibition Commissioner issue revised instruction on the use of the prescribing of alcoholic liquors for medicinal purposes by physicians.—Proceedings, House of Delegates, A. M. A., 1924, p. 37.

And again, in 1925, the following resolution was adopted by the House of Delegates:

Resolved, In view of the fact that such portions of the Volstead Act and the amendatory acts may be declared unconstitutional, that, as a substitute therefor, regulations should be forthwith drafted by the Prohibition Department to the end that the present abuses may be abated, and existing prohibitions as to the practice of medicine removed; and that this Association use all means within its power looking to the preliminary approval of such regulations by the Prohibition Department and the Commissioner of Internal Revenue; and be it further

Resolved, That the Board of Trustees be directed to appoint a committee to cooperate with the Commissioner of Internal Revenue and the Secretary of the Treasury in the formulation of such regulations as under the National Prohibition Act, as amended, as may be necessary to carry said act into effect so far as the medicinal use of liquor is concerned.—Proceedings, House of Delegates, A. M. A., 1925, pp. 34-35.

Pursuant to the resolution of 1925, the Board of Trustees appointed a committee to formulate the proposed regulations, and such regulations, duly approved by the Board of Trustees, were submitted to the Treasury Department.

Moreover, when the case of *Lambert* v. *Yellowley* came on for argument in the Supreme Court of the United States, the American Medical Association filed a brief as amicus curiae by William C. Woodward, secretary of the Bureau of Legal Medicine and Legislation, protesting uncompromisingly against this act of Congress in interfering with the practice of medicine by limiting the amount which a physician may prescribe for any one patient, to one pint of intoxicating liquor in any ten days.

This is called by Dr. Bevan a part of the propaganda against prohibition. If Dr. Bevan had informed himself of the facts or had really considered the meaning of the words he has used, he would have recognized the vicious twist which will be given to them by every opponent to the fulfilment of his life's work for the improvement of medical education. If a physician shall not determine what and how much of any therapeutic remedy he may give his patient, who shall? Shall the question of whether and how often a patient shall be vaccinated against smallpox be determined by the fanatic anti or by the physician? Dr. Bevan knows the answer and he knows that the true answer is applicable to the prescribing of whisky the same as to the giving of diphtheria antitoxin or of the vaccine of cowpox. The real question at issue in this legal controversy is much broader than that involving the prescribing of alcoholic beverages for medicinal use. It is the important problem whether the state control of medical practice shall be usurped by the federal government. This has been removed from the courts by a five to four decision in the Supreme Court. The duty has been put squarely up to the medical profession, to compel Congress to modify the existing law and free that profession from the unwarranted and usurped congressional control of its trained judgment in the treatment of disease. Dr. Bevan is right in demanding that the subject of ethics is urgently needed as a part of the medical curriculum just as it is needed as a part of all education of youth today. But it is extremely unfortunate to cloud this main question with prohibition propaganda and erroneous statements concerning a group of the profession, which makes up a large majority, and which believes that only such regulations should be placed on the prescribing of spirituous liquor as shall safeguard its employment as a therapeutic agent and prevent its diversion to beverage uses.

No further comment on or characterization of the address of Dr. Bevan is necessary than to bring to the attention of the medical profession the foregoing facts in the case, which in the judgment of fair-minded men must make it impossible to defend the assertion that "a well organized group in the profession," and not the American Medical Association itself, was responsible for the carrying on of the attack on section 7 of the Volstead Act in the presentation of the case of *Lambert* v. *Yellowley* before the Supreme Court.

SAMUEL W. LAMBERT, M.D., New York.

THE PATENTS IN SCARLET FEVER TOXIN AND ANTITOXIN

To the Editor:—Recent editorials in British journals indicate a lack of information concerning the purpose and the mode of administration of the patents obtained by us covering scarlet fever preparations. Had the author of the articles read our communication on this subject published in THE JOURNAL, Sept. 26, 1925, p. 996, he would know that there is no cause for alarm.

The results of the research to which he refers were published in the latter part of 1923 and the beginning of 1924. At that time, it was suggested to us that the taking out of a patent on the materials described would safeguard their quality. We were not convinced of the necessity for such a step and refused to consider it. In a short time the distribution of the scarlet fever preparations was begun by commercial manufacturers. Some of these products were undesirable, because of faulty methods of preparation, inaccurate standardization or inadequate dosage. It became apparent that, if the public was to derive the full benefit of the recently developed methods for the control of scarlet fever, some additional means of controlling the quality of these products would have to be found. The matter was taken up with prominent members of the medical profession and with government officials, who again advised that a patent would be both ethical and desirable as the only means of exercising the necessary control. We still hesitated, not on account of any doubt as to the ethical nature of such a patent but because we correctly anticipated that it would cost much in time and effort which we would prefer to devote to other work. However, after careful consideration, it seemed that we should not attempt to avoid the responsibilities connected with the practical application of our discoveries. We therefore applied for a patent, which was granted. The administration of this patent was placed in the hands of a committee composed of the director of the John McCormick Institute, where the research was done; two well known philanthropists, who have demonstrated their interest in medical progress by liberal donations to research, medical schools and hospitals; the benefactor whose generosity was largely responsible for the development of scarlet fever antitoxin; the distinguished attorney through whose efforts the patent was obtained and who had consulted officers of the American Medical Association and had their approval before undertaking that work; a secretary, and ourselves to furnish technical advice as to methods, standards and dosage. No member of the Scarlet Fever Committee receives any compensation for his service with the exception of the secretary, who receives $25 a month. We have not and do not expect to receive any compensation whatever for placing the patent in the hands of the committee other than the assurance that it will be administered in such a manner that adequate supplies of reliable scarlet fever preparations shall be available.

During the first year and a half of its existence, the Scarlet Fever Committee secured the cooperation of four of the best American manufacturers, who agreed to distribute only those scarlet fever preparations which meet the standards of the committee for these products. The committee maintains an organization for testing samples of every lot of each scarlet fever product manufactured by its licensees. The two health departments which made application received free licenses. In addition, the committee has furnished without charge the

materials and workers necessary to the control of a number of epidemics of scarlet fever in communities, schools, institutions and hospitals. Statistics resulting from this work will be published from time to time. The committee also maintains research work directed toward the solution of technical difficulties and other problems connected with the control of scarlet fever.

The fear of monopoly expressed in British editorials is wholly unfounded, as shown by the fact that not only have all American manufacturers who meet the standards of the committee been licensed on equal terms, but at the time application was made for the British patent a license was offered to one of the largest manufacturers in England. No reply to this offer was received. Subsequently, arrangements were made so that approved materials could be obtained in England from the manufacturers licensed in America. The Scarlet Fever Committee does not attempt to fix prices, believing that by not granting a monopoly, thus retaining the factor of competition, and wording the license-contracts so that with every reduction in price to the consumer the manufacturer reduces the sum paid the committee for testing his products, the lowest prices compatible with good quality and fair profit to the manufacturer will most quickly come into effect. This belief has been justified by the reductions in prices already made by licensed manufacturers.

While we appreciate the compliment implied in the suggestion that the British government seize our patent, we believe that friendly cooperation would be more effective.

It seems hardly necessary to add that the author of the editorials referred to may obtain further or more detailed information, should he wish it, by communicating directly with us or with the Scarlet Fever Committee.

GEORGE F. DICK, M.D.
GLADYS HENRY DICK, M.D.
Chicago.

DECAY OF DECIDUOUS TEETH

To the Editor:—In Queries and Minor Notes (THE JOURNAL, March 26, p. 1024) is an answer to a correspondent from Minnesota who asks how he can prevent decay of deciduous teeth. Scrubbing the teeth will not do a particle of good. These children are apparently short on lime; the mother's milk was insufficient. The correspondent should have been advised to give the child proper food, including plenty of vitamins and plenty of milk, as well as feeding extra calcium. These children are often short on thyroid, and poor thyroid makes for teeth that decay rapidly in young children. Parathyroid extract may be of some value, and so is thymus at times. Apparently, the mother's milk of these children does not contain the proper elements of nutrition.

I would recommend a careful study of the article on this subject by dentist Weston A. Price of Cleveland (*Am. J. Dis. Child.* **33**:78 [Jan.] 1927).

OLIVER T. OSBORNE, M.D., New Haven, Conn.

TIMING DEVICES IN MEDICAL PRACTICE

To the Editor:—The wide field of usefulness suggested by the ingenious clock described by Dr. Joseph B. De Lee in THE JOURNAL, March 26, may be considerably increased by its inclusion into the instrumentarium of the well equipped cardiac clinic.

Certain modifications in the mechanism of the clock render it peculiarly serviceable in the performing of routine cardiac function tests. In a communication entitled "A Clock for the Cardiac Clinic" (*Boston M. & S. J.* **195**:707 [Oct. 7] 1926) I attempted to point out how function tests that utilize pulse frequency ratios may be greatly simplified by this chronometer.

Dr. De Lee's clock is too valuable an instrument to remain concealed within the walls of an obstetric operating room, and this note is written merely to call attention to its widespread applicability in other fields of activity, not the least of which is its general use in the study of cardiovascular disorders.

ALBERT S. HYMAN, M.D., New York.
Director, Witkin Foundation for Study and Prevention of Heart Disease.

THE ALUMINUM CENTENARY

To the Editor:—In THE JOURNAL, March 19, page 928, I noted a little item referring to the centenary of aluminum and quoting Wöhler as the discoverer of this metal. Only a few weeks ago I was talking with Mr. Junius D. Edwards of the Aluminum Company of America about this very matter. Mr. Edwards convinced me, in the light of information recently dug up, that the real discovery of metallic aluminum was not made by Wöhler, but by Oersted.

E. E. FREE, 175 Fifth Avenue, New York.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

"LUCKY TIGER"

To the Editor:—Will you please furnish me with the formula of "Lucky Tiger Hair Tonic," put out by the Lucky Tiger Remedy Company, Kansas City, Mo., and state whether it is injurious or not? If this inquiry is published in THE JOURNAL, I would appreciate it if my name is not mentioned.

M.D., Louisiana.

ANSWER.—The A. M. A. Chemical Laboratory has not analyzed "Lucky Tiger," but reports of untoward effects following its use have been received. One physician wrote that a patient had used the stuff "with the result that a most severe acute dermatitis developed, with a marked eczema following, which literally covered the head with crusts." Another physician has stated that he was treating "a case of dermatitis venenata of the scalp, face, neck and upper chest, apparently due to this preparation." Still another physician reported that a patient applied Lucky Tiger "to her scalp and some evidently ran down on her face and neck and produced a severe dermatitis."

BUBONIC PLAGUE

To the Editor:—Was the plague that devastated London in 1665 the same that we understand now as bubonic plague? Did one attack then produce immunity from further attacks? Does one attack of bubonic plague render the recovered person immune from further attacks? What percentage of present-day bubonic plague patients recover? What percentage died in the 1665 epidemic in London?

M. B. STIRLING, M.D., Burton, Neb.

ANSWER.—Fielding H. Garrison, in "An Introduction to the History of Medicine" (edition 2, Philadelphia, W. B. Saunders Company, 1917, p. 298), writes:

> The bubonic plague, while it did not sweep all Europe as formerly, struck with terrific force in some places. The Great Plague of London (1665) carried away 69,000.

The understanding at the time of the Great Plague of London was that one attack usually conferred immunity. The modern view on this point can be taken from "Disease Prevention," by H. H. Waite (New York, Thomas Y. Crowell Company, 1926, p. 276): "One attack of plague nearly always protects for life."

Concerning the mortality in plague, A. A. Stevens in "The Practice of Medicine" (Philadelphia, W. B. Saunders Company, 1922, p. 166), writes: "The mortality of the bubonic

form varies considerably in different epidemics, but the average is about 75 per cent."

The Encyclopedia Britannica says that the total number of deaths from plague in 1665 was 68,596 in a population estimated at 460,000, out of which two thirds are supposed to have fled to escape the contagion. The encyclopedia comments that this number is likely to be too low, since of the 6,432 deaths from spotted fever, many were probably really from plague.

IMMUNITY AFTER BIRTH OF INFANT OF MOTHER INFECTED DURING PREGNANCY

To the Editor:—If a pregnant woman should have measles, smallpox, scarlet fever or such, would the baby after birth be immune for life?

J. L. GILLELAND, M.D., Pullman, Wash.

ANSWER.—A pregnant woman may have any one of the diseases mentioned without infection of the fetus. In that case any immunity transmitted to the child would be in the nature of a passive immunity of comparatively short duration by virtue of antibodies passing from the blood of the mother to the child and after birth perhaps through the milk of the mother. On the other hand, it is also possible that the fetus under the circumstances may pass through an attack of any one of these diseases while still in the uterus and in that case the immunity, which would be in the nature of an active immunity because the body would have been under the direct stimulus of the infecting agent in question, would last for a long time, if not for life.

FREQUENCY OF URINATION AND TRIGONITIS

To the Editor:—A woman, aged 42, complained of an annoying sensation in the bladder. She described this sensation as a "nerve jumping." Clinically she complained of frequency of urination. This continued for the last two years without any period of relief. A cystoscopic examination revealed a moderate trigonitis, and a course of irrigations with silver nitrate was instituted over a period of one month, the treatments being given thrice weekly. She did not obtain relief from this or from any other medication, either locally or orally. Of late she has been driven almost to distraction by her symptoms. She was given advice to discontinue irritating substances, such as tea and spices, which she formerly used a great deal, and I am certain that she has done this. Can you suggest anything else? Please omit name.

M.D., Pennsylvania.

ANSWER.—Provided there is no gynecologic complication that could be held responsible for the vesical symptoms, there are three other possibilities:

Routine irrigations of an inflamed bladder not only fail often to furnish relief but are apt to aggravate the condition through the distention of an inflamed organ. Cystitis in women is better treated by instillations; that is, the deposition of a small amount of an antiseptic solution into the empty bladder. For this purpose a 10 per cent solution of mild silver protein is used, and, after the sensitiveness has been obtunded, a 1 per cent solution of strong silver protein. One ounce of the fluids is sufficient. This treatment is administered every other day.

In a good many instances a so-called trigon cystitis is nothing else but a retrostrictural engorgement of the mucosa of the bas fond. Dilation of the stricture brings relief. It may therefore be suggested to explore the urethra with an olive-tipped sound or bougie.

Frequency of urination and a so-called irritable bladder may also be due to some renal derangement, such as tuberculosis or mixed nephritis.

The situation has to be cleared up by a minute examination of the catheterized urine, functional tests of each kidney, and chemical investigation of the blood.

FETAL MOVEMENTS — VERSION IN OBSTETRICS

To the Editor:—I should like to have better knowledge of the extent of fetal movements in utero. I have seen some interesting knots in the cord, suggesting many changes in position. What induces such changes? How late in the gestation period may podalic or cephalic versions take place? Please omit name and address.

M.D., Indiana.

ANSWER.—Active motion of the fetus is a normal occurrence which may be seen, felt and heard. It is a positive sign of pregnancy and can usually be elicited after the fifteenth week of pregnancy but may at times be recognized as early as the twelfth week. Passive movements of the fetus, however, occur, but these may be present whether the fetus is dead or alive. Another form of movement in utero which is readily detectable is fetal hiccup. When this is present one may see, hear and feel short, quick jerks which recur from fifteen to thirty times a minute. Swallowing and sucking movements are also present, but these can not be diagnosed. Since Ahlfeld's study on the respiratory action of the child in utero, it is generally believed that such movements take place and are detectable externally. In some thin women one may occasionally observe that the abdominal wall makes from sixty to eighty short excursions each minute. These are due to the short movements of the fetal chest.

True knots in the cord are uncommon. When they are formed during labor as the result of the passage of the child through a loop of cord, they have little clinical significance. When, however, they are formed during the first few months of pregnancy, they may be pulled so tightly by the movements of the fetus that death of the latter will result.

Spontaneous version of the child may occur at any period of gestation and may also occur during labor. A few cases have been reported in which roentgenograms showed the spontaneous version during labor.

MORPHINE FOR HEMORRHAGE IN TUBERCULOSIS

To the Editor:—Please advise me to what extent morphine is used to control hemorrhage in advanced tuberculous cases. The maximum necessary each day? Is it necessary in any way to prevent hemorrhage? Should it be used in the interval between hemorrhages? Please omit my name.

M.D., Arkansas.

ANSWER.—The indication for the use of morphine in pulmonary hemorrhage is the control of cough. The indication is better met, however, by codeine, if a narcotic is to be used. Morphine locks up intestinal secretions, as is well known, and it also locks up the bronchial discharges. The escaped blood, therefore, remains in the lungs and becomes a dangerous element in the problem in that it readily putrifies and contributes to a possible bronchopneumonia, which often proves fatal. Unless there is a special indication for its use, morphine should not be given in cases of pulmonary hemorrhage; when administered, however, it should be used as sparingly as possible. It should not be used in intervals between hemorrhages.

PRICKLING IN LEGS IN DIABETES

To the Editor:—Could you suggest some treatment for a prickling and burning sensation of the legs? This condition is present in a patient with diabetes, which no doubt has involved the spinal cord. This patient is 65 years of age, and has had diabetes for about twenty years. The usual treatment for diabetes is being used. Kindly omit my name.

M.D., New York.

ANSWER.—Before suggesting treatment for this patient, one would like to know whether the usual treatment for diabetes is being used to the extent of keeping the patient sugar free. If a hyperglycemia exists, it is doubtful whether the local sensation in the legs can be relieved by local treatment. If, however, the patient is maintained in a state of sugar freedom, some simple lotion, such as calamine, is frequently successful in relieving the irritation. It also may be of service to give enough alkali by mouth (sodium bicarbonate) to render the urine alkaline and at the same time to apply a 2 per cent solution of sodium bircarbonate to the involved areas.

INJECTION OF PHRENIC NERVE INSTEAD OF PHRENICOTOMY

To the Editor:—I have contemplated the possibility of substituting injection of the phrenic nerve with alcohol for phrenicotomy in cases of tuberculosis involving only the base. I had thought of having an assistant to use the fluoroscope with diaphragm so arranged that I could work on the patient in the light and yet have him observe the movements of the diaphragm at the same time under the fluoroscope. What do you think would be the best location for such injection, and what would you suggest as to the possibility of injury to the patient?

J. D. RILEY, M.D., El Paso, Texas.

ANSWER.—The possible dangers from the injection of alcohol without a surgical exposure of the phrenic nerve would seem to be too great to justify its attempt. The advantages of injecting alcohol after such an exposure over severance of the nerve would not seem to be enough to contraindicate phrenicotomy. Any site of election for injection of alcohol without exposure of the nerve would involve the reaching of important anatomic structures in the neck, with complications that might prove fatal.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS: Washington, D. C., May 17. Sec., Dr. William H. Wilder, 122 So. Michigan Blvd. Chicago.

ARKANSAS: Regular Board, Little Rock, May 10-11. Sec., Dr. J. W. Walker, Fayetteville. Homeopathic Board: Little Rock, May 10. Sec., Dr. Allison A. Pringle, Eureka Springs.

CALIFORNIA: Los Angeles, May 16-19. Sec., Dr. Charles B. Pinkham, 908 Forum Bldg., Sacramento.

FLORIDA: Tampa, June 13-14. Sec., Dr. William W. Rowlett, Box 603, Tampa.

GEORGIA: Atlanta and Augusta, June 8-10. Sec., Dr. J. W. Palmer, Ailey.

IOWA: Iowa City, June 7-9. Director of Exams. and Licensure, Mr. H. W. Grefe, Des Moines.

MARYLAND: Baltimore, June 7-10. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral Street, Baltimore. Homeopathic Board: Baltimore, June 14. Sec., Dr. J. S. Garrison, 517 Old Orchard Road, Baltimore.

MICHIGAN: Ann Arbor, June 14-16; Detroit, June 20-22. Sec., Dr. Guy L. Connor, 707 Stroh Bldg., Detroit.

NATIONAL BOARD OF MEDICAL EXAMINERS: Parts I and II, June 15-17. Applications should be made by May 15. Sec., Dr. John S. Rodman, 1600 Walnut Street, Philadelphia.

NEW JERSEY: Trenton, June 14-15. Sec., Dr. Charles B. Kelley, 28 West State Street, Trenton.

NEVADA: Carson City, May 1. Acting Sec., Dr. Edward E. Hamer, Carson City.

OHIO: Columbus, June 7-11. Sec., Dr. H. M. Platter, Hartman Hotel Bldg., Columbus.

TENNESSEE: Memphis, Nashville and Knoxville, June 17-18. Sec., Dr. A. B. DeLoach, 733 Medical Arts Bldg., Memphis.

VIRGINIA: Richmond, June 15-18. Sec., Dr. J. W. Preston, Box 444, Richmond.

Indiana Reciprocity Report

Dr. Eldridge M. Shanklin, secretary of the Indiana Board of Medical Registration and Examination, reports that 43 candidates, including 1 osteopath, were licensed by reciprocity from May, 1926, to January, 1927. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Howard University School of Medicine		(1925)	Dist. Colum.
Emory Univ. School of Med.	(1921), (1926)	Georgia, (1922)	Alabama
Bennett College of Eclectic Medicine and Surgery		(1901)	Illinois
College of Physicians and Surgeons, Chicago		(1907)	Illinois
Chicago College of Medicine and Surgery		(1912)	Illinois
Northwestern Univ. Med. School	(1902), (1925), (1926) (1924)	Ohio	Illinois
Rush Medical College	(1923), (1924), (1925), (1926) (1923)	California, (1924) Oregon	Illinois
University of Illinois College of Medicine	(1923),	(1924)	Illinois
State University of Iowa College of Medicine		(1920)	Iowa
Kansas Medical College, Topeka		(1907)	Kansas
University of Louisville School of Med.	(1904),	(1925, 2)	Kentucky
University of Maryland School of Medicine		(1926)	Maryland
Harvard University	(1903),	(1925)	Illinois
Missouri Medical College		(1890)	Illinois
University Medical College of Kansas City		(1899)	Missouri
Washington University School of Medicine		(1924)	Missouri
University of Michigan Medical School	(1924),	(1925)	Michigan
University of Michigan Homeo. Medical School		(1920)	Michigan
Columbia University College of Phys. and Surgs.		(1922)	New York
Cornell University Medical College		(1924)	New York
Eclectic Medical College, Cincinnati		(1925)	Ohio
Ohio State University College of Medicine		(1925)	Ohio
University of Cincinnati College of Medicine	(1924),	(1925)	Ohio
Jefferson Medical College of Philadelphia		(1915) (1924)	N. Carolina Ohio
University of Budapest, Hungary		(1917)*	Illinois
Osteopath			Missouri

* Verification of graduation in process.

Alabama 1926 Reciprocity Report

Dr. Samuel W. Welch, secretary of the Alabama Board of Medical Examiners, reports that 22 candidates were licensed by reciprocity and 1 by endorsement of his credentials from July, 1926, to January, 1927. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Howard University School of Medicine		(1925)	Ohio
Emory University School of Medicine	(1923) (1924)	(1925)	Georgia
University of Georgia Medical Department		(1925)	Georgia
Rush Medical College		(1924)	Illinois
Indiana University School of Medicine		(1924)	Ohio
Tulane Univ. of La. School of Med.	(1924, 3)	(1925, 4)	Louisiana
University of Michigan Medical School		(1924)	Michigan
Creighton University College of Medicine		(1924)	Nebraska
University of Cincinnati College of Medicine		(1925)	Ohio
Memphis Hospital Medical College		(1907)	Louisiana
University of Nashville Medical Department		(1907)	Tennessee
University of Tennessee College of Medicine	(1909)	(1925)	Tennessee
Vanderbilt University School of Medicine		(1922)	Tennessee

Book Notices

HEWAT'S EXAMINATION OF THE URINE AND OTHER CLINICAL SIDE-ROOM METHODS. Revised by G. L. Malcolm-Smith, M.B., Ch.B., F.R.C.P., Clinical Registrar, Longmore Hospital, Edinburgh. Seventh edition. Cloth. Price, $1.50. Pp. 228, with illustrations. New York: Paul B. Hoeber, 1926.

The most novel features of this book are the size and price. A few weeks ago, a laboratory guide sufficiently small to fit into a large coat pocket was noted here. This book, which is also published in England, can be carried in the ordinary vest pocket. It has a pretty blue, stiff back, 216 pages of notes, and a few drawings of such things as urea crystals, triple phosphates, tyrosine and Esbach's tube. The object of the work is to give students short descriptions of methods of examining urine, blood, stomach contents, sputum and pus; it has undoubtedly been found useful, for this is the seventh edition. General practitioners also would find it convenient, but most of the material is in other books which they already have. Students who carry the usual heavy volumes to classes will be delighted to find a volume so petite. They will be surprised, however, to learn that it sells for $1.50 when it should be possible to buy it for 25 cents.

LECITHIN AND ALLIED SUBSTANCES—THE LIPINS. By Hugh MacLean, M.D., D.Sc., Professor of Medicine in the University of London, and Ida Smedley MacLean, D.Sc., F.I.C. Second edition. Boards. Price, $3.75. Pp. 220. New York: Longmans, Green & Company, Ltd., 1927.

This is a second edition of one of the valuable series of monographs on biochemistry, the first edition having been published in 1918. Perhaps the most striking thing is the relatively small amount of advance made in this field in the intervening years. Not enough has yet been learned about these important constituents of all living cells even to enable a satisfactory nomenclature to be agreed on. The authors use the term "lipins" to designate the phosphatides and cerebrosides most commonly called lipoids, whereas in this country the same name has been used by several writers as a broader term to include a much wider group of substances. The term "lipides," recommended by the International Conference of Chemistry to cover the same group as MacLean's lipins, has encountered objection, so the question of what to call these substances is still unsettled and usage remains chaotic. Like the rest of the monographs of this series, this work is an invaluable source of information on the subject covered, and completes the volume on the fats by Leathes and Raper. The medical reader will note that the important recent work on the rôle of "lipins" in immunology has been entirely overlooked. The statement that "it is questionable whether the lipins are concerned to any extent in immunity reactions" is no longer justified in view of the work of Landsteiner, Sachs and others. Among the chief advances made in the past decade of study of the lipoids have been the contributions from Levene's laboratory on their chemical structure, and Bloor's work on their distribution in the blood.

PHYSIOLOGISCHE THEORIE DER VERERBUNG. Von Professor Dr. Richard Goldschmidt, 2. Direktor des Kaiser Wilhelm-Instituts für Biologie in Berlin-Dahlem. Paper. Price, 15 marks. Pp. 247, with 59 illustrations. Berlin: Julius Springer, 1927.

The author of this monograph is well known in the field of genetics and heredity by his brilliant experiments on heredity of sex and the phenomenon of intersex or quantitative sex factors in the lower animals. In the present volume he attempts to develop a physiologic theory of heredity by combining the theory of genes of the mendelian school with the known facts and theories of embryologic development. The author claims nothing more for this theory than that it may be a guide and a help to other scholars in the orientation of a difficult field. He expressly states that he expects his hypothesis to be superseded in the near future, especially from data in the important field of biochemistry. It is in the field of biochemistry that the working geneticists of today are particularly deficient. The volume is not easy reading and should be tackled by those who are already familiar with the essential facts and the particular nomenclature current in the field of genetics and heredity; with this equipment,

one may read the volume with interest and profit. The author seems eminently fair and logical in most of his deductions. He ends the monograph with the following statement, indicating his breadth of view: "A theory is only a step on the road to knowledge. It is no end in itself. We must not judge too severely its faults and failures. Every investigator should be mindful of the words of Goethe: 'Nature is always true, always earnest, always imperative, always right. The faults and errors are made by man.'"

READINGS IN ABNORMAL PSYCHOLOGY AND MENTAL HYGIENE. Edited by W. S. Taylor, Professor of Psychology in Smith College. With an Introduction by Joseph Jastrow, Professor of Psychology in the University of Wisconsin. Cloth. Price, $4. Pp. 789. New York: D. Appleton & Company, 1926.

In this volume the professor of psychology of Smith College has assembled selections from various textbooks and from the periodical literature on psychology, with a view to presenting material that will give the average reader a proper point of view in the field concerned. The rise of various schools of abnormal psychology largely associated with the names of distinguished leaders like Janet, Freud, Jung and McDougall has naturally made divergent views. Worst of all are the vocabularies for each of the groups. The advantage of assembled documents such as can be found in Taylor's selection is the grouping under major headings of this material. Professor Taylor has been able to tie together the sections of the work by his succinct and enlightening comments. The reader who wishes to inform himself broadly in these fields can find no better work.

THE THERAPEUTIC MANUAL OF THE UNIVERSITY OF MICHIGAN HOSPITAL. A Symposium Compiled for the Convenience of Medical Students, Internes and Practitioners. By Shelby W. Wishart, M.S., M.D., James F. Johantgen, B.S., M.D., and Norman E. Clarke, M.S., M.D. Leather. Price, $5. Pp. 393. Ann Arbor: George Wahr, 1926.

In this booklet have been collected the favorite prescriptions of the University of Michigan Hospital. The volume includes essentially an outline of medical treatment, of laboratory technic, of data and of hints on the care of the patients—indeed, a richness of material that more than justifies its publication. Many physicians may differ as to the desirability of some of the therapeutic advice and the scientific character of some of the prescriptions. The advice to blow the two nostrils at the same time is a debatable topic with otolaryngologists. The inclusion of eight ingredients in some of the dermatologic prescriptions is a matter for doubt. The drugs included are not always those appearing in the list of useful drugs selected by the Council on Pharmacy and Chemistry, nor are the titles those chosen by the most recent pharmacopeia; but the general tenor of the volume is one of practical assistance.

DIE UNFRUCHTBARKEIT DER FRAU: Bedeutung der Eileiterdurchblasung für die Erkennung der Ursachen, die Voraussage und die Behandlung. Von Dr. Erwin Graff, a. o. Professor für Geburtshilfe und Gynäkologie an der Universität Wien. Paper. Price, 6.90 marks. Pp. 100, with 2 illustrations. Vienna: Julius Springer, 1926.

In this timely contribution to the study of sterility, Graff summarizes his observations in Vienna and compares them with the published reports of others. The monograph consists almost wholly of a discussion of the value of the Rubin patency test. The technic, indications and contraindications and the dangers of the test are separately dealt with in detail, and case reports are cited in illustration. The dangers of an embolism, of emphysema, and of infection resulting from the test, says Graff, are minimal if the indications and contraindications are minutely adhered to. He does not believe that the patency test is a procedure for the general practitioner but one suited only to the well informed specialist. He concludes that its informative value is far greater than that of the usual methods of examination. The remainder of the monograph considers the percentage of responsibility resting on the male in the question of reproductive failure, as evidenced chiefly by the examination of spermatozoa. In cases in which the tubes are found patent and normal spermatozoa are present, he suggests that the female secretions may be hostile to the spermatozoa of her mate. Graff believes that this hostility might be overcome by immunizing the husband with the maternal whole blood.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

DE LAMAR LECTURES, 1925-1926. By David Marine, Alice Hamilton, Francis Carter Wood, Frederick W. Sears, Thomas Adams, W. G. Smillie, Edward R. Baldwin, Louis I. Dublin, Joseph Goldberger, C. R. Stockard, Horace Lo Grasso, Robbins B. Stoeckel, Sir Arthur Newsholme. The Johns Hopkins University School of Hygiene and Public Health. Cloth. Price, $5. Pp. 220, with illustrations. Baltimore: Williams & Wilkins Company, 1927.

Authoritative popular lectures on health and hygiene.

VARIATIONS IN THE FORM OF THE JAWS: With Special Reference to Their Etiology and Their Relation to the Occlusion of the Dental Arches. By J. Sim Wallace, M.D., D.Sc., L.D.S., Lecturer on Preventive Dentistry, King's College Hospital. The Cartwright Prize Essay. Cloth. Price, $6. Pp. 265, with 84 illustrations. New York: William Wood & Company, 1927.

A prize essay based on twenty years' study of the author's own sons.

THE NATURAL PROCESSES OF HEALING IN PULMONARY TUBERCULOSIS. By Marc Jaquerod, M.D., Physician in Charge, Grand-Hôtel Sanatorium, Leysin, Switzerland. Translated by J. Denny Sinclair, M.B., Ch.B. Cloth. Price, $3. Pp. 107, with 105 illustrations. New York: William Wood & Company, 1927.

Roentgen-ray study of the progress of healing in tuberculosis, with excellent prints.

THE EMBRYOLOGY OF THE PIG. By Bradley M. Patten, Associate Professor of Histology and Embryology, School of Medicine, Western Reserve University. Cloth. Price, $3.50. Pp. 323, with 168 illustrations. Philadelphia: P. Blakiston's Son & Company, 1927.

Well printed and excellently illustrated textbook with emphasis on the porcine embryo.

INFECTIONS OF THE HAND. By Lionel R. Fifield, F.R.C.S., Surgical Registrar and First Assistant and Demonstrator of Anatomy, London Hospital. Cloth. Price, $3. Pp. 192, with 67 illustrations. New York: Paul B. Hoeber, 1927.

A brief handbook for those who find Kanavel's classic work too much for them.

TEXTBOOK OF BIOLOGICAL CHEMISTRY. By James B. Sumner, Ph.D., Assistant Professor of Biological Chemistry, Cornell University. Cloth. Price, $3.50. Pp. 283. New York: Macmillan Company, 1927.

A brief text for elementary students.

LA TERAPIA INSULINICA. Per Fernando Rietti, docente nella R. Universita di Bologna. Guida pratica per i medici. Paper. Pp. 109, with 9 illustrations. Torino, 1927.

Italian handbook on insulin therapy.

ANATOMIE TOPOGRAPHIQUE DU SYSTÈME NERVEUX CENTRAL. Par Georges Guillain, professeur de clinique des maladies du système nerveux à la faculté de médecine de Paris, et Ivan Bertrand, chef du laboratoire d'anatomie pathologique de la clinique des maladies du système nerveux à la faculté de médecine de Paris. Cloth. Price, 95 francs. Pp. 322, with 60 illustrations. Paris: Masson & Cie, 1926.

PERNICIOUS ANAEMIA, LEUCAEMIA, AND APLASTIC ANAEMIA. An Investigation from the Comparative Pathology and Embryological Point of View. By J. P. McGowan, M.A., M.D., B.Sc., Pathologist to the Rowett Research Institute, Aberdeen. Cloth. Price, $3. Pp. 116, with 12 illustrations. New York: Paul B. Hoeber, 1927.

COMPARATIVE STUDIES ON FURCOCERCOUS CERCARIAE. By Harry Milton Miller, Jr. Illinois Biological Monographs. Vol. X. No. 3. Paper. Price, $1.25. Pp. 112, with illustrations. Urbana: University of Illinois Press, 1926.

DERMATITIS PRODUCIDAS POR LA PROCAÍNA EN LOS DENTISTAS. Por el Doctor Ricardo E. Cicero, profesor de clinica de Dermatologia en la facultad de medicina. Paper. Pp. 11. Mexico, D.F., 1927.

TREČIASIS LIETUVOS GYDYTOJU SUVAŽIAVIMAS SPALIU MEN. 2-4 D. 1924 M. Paper. Pp. 245, with illustrations. Kaunas (Lituanie): Université de Lituanie, Faculté de Médicine, 1926.

TRAVAUX ET MÈMOIRES. Tome I. L'aphasie,—L'acromégalie, etc. Par Pierre Marie. Tome I. Paper. Price, 30 francs. Pp. 358. Paris: Masson & Cie, 1926.

Medicolegal

Not Offense of Practicing Medicine Without License

(Grady v. State (Miss.), 109 So. R. 728)

The Supreme Court of Mississippi, division B, reverses a judgment of conviction of defendant Grady and remands the case because, while he was charged with "practicing as a physician and surgeon without first being examined and obtaining a license so to do as required by law," the trial court erred in granting an instruction which told the jury that it should convict the defendant if he had failed to record his license as required by law. In other words, the supreme court hold that the offense of practicing medicine without a license, declared by section 1068 of Hemingway's code, is not committed by a failure to file a license in time to prevent its becoming void under section 6372.

Loss of One Testis a Permanent Partial Disability

(Kostida v. Department of Labor and Industries (Wash.), 247 Pac. R. 1014)

The Supreme Court of Washington, in affirming a judgment which reversed the action of the department of labor and industries in refusing an allowance for permanent partial disability for the loss of a testis, says that the claimant, while employed as a miner, received an injury which required an operation for the removal of a portion of the scrotum and later the removal of the left testis. Unquestionably he had suffered a permanent loss of one of the members of his body, but the more important question raised here was whether that loss was an "injury known in surgery to be permanent partial disability," within the provision of the workmen's compensation act of the state. The medical experts did not at all agree on the answer to this question. Six eminent physicians testified on the point, five for the department and one for the claimant. All seemed to be agreed on the proposition that the injury did not create a permanent partial disability, so far as ability to perform manual labor was concerned. The basis of their opinion was stated to be that on the loss of one testis, the other one, if normal, proceeds to secrete a much larger amount of fluid than formerly, and performs the duties formerly devolving on both, although the claimant's witness testified that it was impossible to say that one organ will compensate in its functioning for the loss of the other. It was testified that the loss of one testis does not affect procreation or, to a determinative degree, the internal functioning of the body, and that the result is much the same as in the loss of a kidney or any gland of the body whose purpose is to secrete fluids for bodily function. From these facts, the witnesses for the department concluded that there was not permanent partial disability.

It may be that in the loss of a testis the other one will double its work, and attempt, so far as lies within its power, to perform the labor of the one that is lost, to the end that the human body may not suffer any impairment. It may even be assumed that medical science has demonstrated to its own satisfaction that an actual loss does not result, although to those outside the sacred precincts of that very able profession there must be a doubt as to the completeness and definiteness of the demonstration. But there is still another vital consideration in such a case as this.

Either nature in the creation of man determined that the needs of the body could not be met with one testis, or else two were supplied to furnish a reserve power in case of accident or disability to one. If it is admitted that the theory of a reserve power is to be the only ground on which the presence of two of these organs can be accounted for, still it does not seem to this court that such a loss should remain uncompensated for. The theory of the compensation act was to prevent industry from exacting a toll from the laborer which, uncompensated, tends to make him a charge on society. The claimant may not continue in any employment that brings him under the provisions of the act, and, should the other testis be destroyed, there will unquestionably be permanent partial disability. But, had the industry in which he lost the first organ not taken its toll from him, the later injury would still leave him able to perform his functions as before. It surely cannot be contended that industry can cause a loss of a kidney, a testis, and other like useful organs of the body and then turn the employee out on society with every reserve power destroyed, and yet refuse compensation because he still has left one half of the members with which nature endowed him. One has a right to remain in possession of all those useful members of his body which are provided by nature, and to insist that, if he has two of any kind, on the loss of one of them he shall not be denied compensation because both were not taken.

Roentgenologist Introducing Evidence of Reputation

(Green v. Shaw (S. C.), 134 S. E. R. 226)

The Supreme Court of South Carolina, in reversing a judgment rendered for the defendant and in remanding this case for a new trial, says that the plaintiff brought this action to recover damages which she alleged she had suffered from the negligence of the defendant physician in treating the index finger of her right hand with the roentgen ray for the purpose of removing two warts. It was urged that the trial court erred in admitting, over objection, the testimony of two physicians as to the efficiency and carefulness of the defendant and as to his reputation. This action was based on certain specific acts of the defendant, alleged to have been negligent, wilful and wanton. An attack was not made on, nor did this action involve, his general skill, competence, ability or reputation. A physician might be ever so skilful or competent in a general way, or might have an unexcelled reputation, and yet be guilty of the grossest negligence in his treatment of a particular case. It is clear to reason, therefore, that, in this case, testimony as to the defendant's reputation was inadmissible, and the admission of such testimony was reversible error. This view is supported by the weight of authority.

The use of dangerous instrumentalities, such as electricity or radium in the treatment of disease, demands not only skill and competence but also the exercise of such care as may be necessary and required by reason of the inherent danger of the instrumentality employed. The highly specialized expert employing such dangerous instrumentalities and the more humble general practitioner employing the simpler remedies are alike subject to the rule that they cannot escape the consequences of their negligent acts in a special case by showing or attempting to show their general reputation for skill and competence.

The oral contention of the defendant that the allegation of wilfulness in the complaint took the case out of the rule, and made competent the evidence complained of, was without merit. This did not in any way change the rule of law. The allegation implied that the defendant was not only negligent but actually wilful in his disregard of the rights of his patient in the proper treatment of her disease, the only difference being that under this allegation punitive damages might be recovered.

Violation of Harrison Narcotic Law Gross Malpractice

(Gregory v. McInnis et al. (S. C.), 134 S. E. R. 527)

The Supreme Court of South Carolina says that, while it is true, as held by the circuit judge, that the Harrison Narcotic Law is a police regulation, the supreme court disagrees with him that the violation of that law does not constitute "gross malpractice." The use of opium as necessary for relief of pain has been known for many years, but it is also well recognized that the abuse of this powerful drug is attendant with great danger to the health, happiness, morals and peace of the people. The purpose of the Harrison law was to allow the use of the drug when needful, but to guard against its indiscriminate dispensation, and to prevent the evil effects which it produced. To carry out the idea of placing the drug within the reach of those lawfully entitled to have it administered to them, provisions are made in the law for its being prescribed and dispensed by physicians,

dentists and veterinary surgeons. It is well known that an unscrupulous physician, dentist or veterinarian has great opportunities to circumvent the intention of the law, and that the traffic in opium is financially fruitful.

By statute it is provided in South Carolina that the state board of veterinary examiners shall have the right to refuse to issue a license to any applicant on the ground of gross immorality or gross malpractice, and one of the reasons given by the board for refusing the petitioner a license was that he had been convicted under the Harrison Narcotic Law of a violation thereof and sentenced to serve one year in a federal prison, and had served such sentence, the board contending that this evidenced such gross immorality or gross malpractice as warranted the refusal of the license. Now, while a veterinary surgeon may do great good with this powerful medicine in the relieving of dumb animals from their sufferings, he may bring about great harm to human beings, and to the peace of the state, by dispensing and bartering the drug illegally. This court does not know of any higher evidence which could have been offered to the state board of veterinary examiners of the guilt of the petitioner of the charges brought against him than the verdict of a jury of his peers, which was approved by the judge of the United States court.

The only legal question pertaining to this matter was whether or not the offenses charged against the petitioner, and of which he was convicted, were such as to establish that he was guilty of "gross malpractice." The term "malpractice" is defined in Corpus Juris as follows:

> "Any professional misconduct or any unreasonable lack of skill or fidelity in the performance of professional or fiduciary duties; evil practice; illegal or immoral conduct; improper or immoral conduct; misbehavior; objectional practice; practice contrary to established rules; practice contrary to rules; wrongdoing. Malpractice may be either wilful, negligent, or ignorant."—38 C. J. 519.

This court thinks that the crime of which the petitioner was convicted showed that he had done "professional misconduct"; certainly, it was "illegal conduct"; it was also "objectionable practice," and "practice contrary to established rules." The jury that tried him found that his acts were "wilful." The exception, which complained of the finding of the circuit judge that the petitioner was not guilty of "gross malpractice," is sustained. The judgment of this court is that the order of the circuit judge granting a writ of mandamus to compel the state board of veterinary examiners to issue a license to the petitioner is reversed and the petition dismissed.

Liability for Damages from Skin Grafting After Injury

(Lane v. Southern Railway Co. (N. C.), 134 S. E. R. 855)

The Supreme Court of North Carolina, in affirming a judgment for $15,000 damages in favor of the plaintiff, says that he was 19 years of age at the time of his injury, which was caused by the negligence of the defendant. He had lost all the fingers of his left hand, except the index finger and the thumb. The wound was repaired by skin grafted from two places on his side, and from his thigh. The operation by which the skin was grafted was necessary, or at least proper, for the repair of his injured hand. It caused him pain and suffering. The grafted skin was very thin, and did not have the vitality and resistance of natural skin. It was easily injured, and when bruised or scratched did not heal readily. It was manifest that, because of his injury, he was permanently handicapped in doing the work of a farmer or any work requiring the use of his hand. The court finds no error in the amount of damages awarded.

In apt time the defendant objected to all the testimony relative to the grafting of skin from the plaintiff's side and thigh, and to the pain caused thereby, and assigned as error the refusal of the court to sustain those objections. The defendant contended that such testimony should have been excluded, for that in no event could it be liable for damages resulting from the grafting of skin by a surgeon on the plaintiff's body, at least in the absence of evidence that this was a necessary or proper treatment of the injury to his hand; that such damages were not caused by any act of the defendant. But the broad general rule with respect to compensatory damages which are given as the pecuniary equivalent for the injury done is that the wrongdoer is liable to the person injured for all natural and direct or proximate consequences of his wrongful act or omission.

It is uniformly held to be the duty of one who has suffered a personal injury by the negligence of another to exercise due care to mitigate the damages by having his injury treated by a physician or surgeon, if the nature of the injury is such as reasonably to require medical treatment or a surgical operation. If the injured person exercises due care to have the injury properly treated, the result of the treatment, if not beneficial, cannot affect the damages which he would otherwise be entitled to recover of the wrongdoer by whose wrongful act he was injured. If the treatment of the injury, procured by the injured party, in the exercise of due care, is beneficial and reduces the damages resulting from the act or omission of the wrongdoer, such reduction relieves the wrongdoer that much. If such treatment is not beneficial, and results in increased or additional damages, the wrongdoer whose act or omission made the treatment necessary or proper must be held liable for such additional or increased damages. It has further been held that where the injured person had received unskilful treatment by a physician or surgeon, increasing the damages, the defendant may be liable for such consequences where the person injured has used reasonable care in selecting the physician or surgeon.

In the instant case there was evidence sufficient at least for the jury to find that the plaintiff had exercised due care in the selection of physicians and surgeons to treat his wounded hand, and that such treatment as he received was proper, if not necessary, to repair the injury to his hand, alleged to have been caused by the defendant's negligence, and to mitigate or reduce the damages resulting from such injury. If the damage resulting immediately from the wrongful act of the defendant was reduced by grafting skin, taken from the plaintiff's body, on the wounded hand, it was but just that the defendant should be held liable for damages resulting from the grafting.

Liability from Drug Sent on Telephone Prescription

(Twombly v. Piette (Vt.), 134 Atl. R. 700)

The Supreme Court of Vermont, in affirming a judgment for the plaintiff without stating the amount of the judgment, says that her evidence tended to show that her mother telephoned to the defendant physician telling him that the plaintiff had had mosquito bites on her head and had accidentally combed through them, so that they were causing her trouble with keeping her hair in curl, and that water came from them, and asking him if he could send something to put on to heal and stop them, in answer to which he said that he could, and would send a white powder to be put on those places. The powder was received and applied, and so burned the plaintiff's head that her mother telephoned to the defendant that her daughter could hardly bear it. The powder sent by the pharmacist, under the defendant's direction, was mercuric chloride. The defendant testified that, deciding from the description given him that the trouble was not mosquito bites, but impetigo, he called up the pharmacy by telephone and asked the pharmacist if he would send to the plaintiff's mother "1 ounce of mild chloride of mercury," to which the pharmacist answered yes; that the next thing that he knew about the matter was when he received word that the medicine burned the plaintiff's scalp, and he suggested that she be sent to him. The pharmacist testified that he was told by the defendant, over the telephone, to send "1 ounce of bichloride of mercury."

The question whether the defendant ordered the pharmacist to send to the plaintiff's mother "bichloride of mercury" or whether it was "mild chloride of mercury," was submitted to the jury in a manner satisfactory to the defendant, the jury being told in that connection that, if the defendant told the pharmacist to send "mild chloride of mercury," and the pharmacist, through mistake, sent "bichloride of mercury,"

then the defendant was not responsible for the negligence or fault of the pharmacist, and the verdict must be for the defendant. The court further instructed the jury in effect that, it being conceded on behalf of the defendant that if he prescribed "bichloride of mercury" to be used on the plaintiff's scalp he was guilty of negligence as a physician in directing the pharmacist to send "bichloride of mercury," if he did so direct, this was a prescription of it, and, if that was the proximate cause of the injuries suffered by the plaintiff, she was entitled to recover in this action. Under the foregoing instructions, to which no exception was taken, the jury must have found that the defendant's order to the pharmacist was to send "bichloride of mercury," for it returned a verdict for the plaintiff.

The ruling of the trial court, rightly made this court thinks, without any exception thereto saved, that the defendant's act in calling up the pharmacist and directing him to send a certain drug to the plaintiff's mother was a prescription of it, established the law of the case in such respect. And it was a prescription by the defendant, a legally qualified practitioner of medicine, to his patient, the plaintiff. It therefore fell within the provisions of section 6284 of the general laws of the state that "the provisions of the two preceding sections shall not apply to legally qualified practitioners of medicine or to their prescriptions or recipes to their patients," which sections require a record to be kept, when a sale is made, of the use to be made of the drug purchased. This disposed of the defendant's contention that the law required the pharmacist to ascertain the proposed use of the ordered drug and that if he would not have sent the bichloride of mercury had he ascertained the proposed use of it, then his negligence in sending it without ascertaining the proposed use of it became the immediate and proximate cause of the sending of it and its subsequent injurious application, and the defendant could not be held liable therefor, even assuming that he had prescribed it.

The defendant having testified that when the plaintiff came to his office he saw the mercuric chloride on her head and told her that she had better go right home and wash it out with a large amount of water, it was proper cross-examination to ask him if, had he cared to, he could not have cleaned that condition up immediately; and "You knew that if that remained there any length of time longer, greater absorption would take place?" The latter question was proper on cross-examination to test the defendant's capacity as an expert.

Question of Fact in Refusal to Submit to Operation

(Gilbert v. Independent Const. Co. (Kan.), 250 Pac. R. 261)

The Supreme Court of Kansas, in affirming a judgment allowing compensation under the workmen's compensation act for total permanent disability notwithstanding that the claimant, a man about 66 years of age, had refused to submit to an operation for a double inguinal hernia, holds that, whether in a workman's compensation case the refusal of the workman to submit to a surgical operation is so unreasonable that compensation should be reduced, or denied, is a question of fact, to be determined from the evidence by the trial court.

Society Proceedings

COMING MEETINGS

American Medical Association, Washington, D. C., May 16-20. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

American Association for the Study of Allergy, Washington, D. C., May 16-17. Dr. A. H. Rowe, 242 Moss Ave., Oakland, Calif., Sec'y.

American Association for Thoracic Surgery, New York, May 9-11. Dr. Ethan Flagg Butler, Robert Packer Hospital, Sayre, Pa., Secretary.

American Association of Genito-Urinary Surgeons, Absecon, N. J., May 9-11. Dr. W. C. Quinby, Peter Bent Brigham Hospital, Boston, Sec'y.

American Bronchoscopic Society, Atlantic City, May 21. Dr. H. B. Orton, 24 Commerce Street, Newark, N. J., Secretary.

American Child Health Association, Washington, D. C., May 9-11. Dr. Philip Van Ingen, 125 East 71st Street, New York, Secretary.

American Climatological and Clinical Association, White Sulphur Springs, W. Va., May 23-27. Dr. A. K. Stone, Auburn Street, Framingham Center, Mass., Secretary.

American Gastro-Enterological Association, Atlantic City, May 2-3. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.

American Gynecological Society, Hot Springs, Virginia, May 23-25. Dr. F. E. Keene, Medical Arts Building, Philadelphia, Secretary.

American Heart Association, Washington, D. C., May 17. Dr. Haven Emerson, 370 Seventh Avenue, New York, Secretary.

American Laryngological Association, Atlantic City, May 23-25. Dr. G. M. Coates, 1721 Pine Street, Philadelphia, Secretary.

American Laryngological, Rhinological and Otological Society, Atlantic City, May 26-28. Dr. R. L. Loughran, 33 East 63d Street, New York, Secretary.

American Neurological Association, Atlantic City, May 24-26. Dr. H. A. Riley, 870 Madison Avenue, New York, Secretary.

American Proctologic Society, Philadelphia, May 12-14. Dr. Louis A. Buie, Mayo Clinic, Rochester, Minn., Secretary.

American Psychiatric Association, Cincinnati, May 31. Dr. E. D. Bond, 4401 Market Street, Philadelphia, Secretary.

American Psychopathological Association, Cincinnati, June 3. Dr. M. W. Peck, 520 Commonwealth Avenue, Boston, Secretary.

American Radium Society, Washington, D. C., May 16-17. Dr. E. C. Ernst, 412 Humboldt Building, St. Louis, Secretary.

American Society of Clinical Investigation, Atlantic City, May 2. Dr. J. T. Wearn, Boston City Hospital, Boston, Secretary.

American Society of Clinical Pathologists, Washington, D. C., May 13-16. Dr. Ward T. Burdick, Children's Hospital, Denver, Secretary.

American Surgical Association, Richmond, Va., May 12-14. Dr. R. B. Greenough, 8 Marlborough Street, Boston, Secretary.

American Therapeutic Society, Washington, D. C., May 14-16. Dr. W. J. Mallory, 1720 Connecticut Ave., N. W., Washington, D. C., Secretary.

American Urological Association, Baltimore, May 23-25. Dr. H. G. Hamer, 723 Hume-Mansur Building, Indianapolis, Secretary.

Arkansas Medical Society, Little Rock, May 11-13. Dr. William R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Associated Anesthetists of the United States and Canada, Washington, D. C., May 16-17. Dr. F. H. McMechan, Avon Lake, Ohio, Secretary.

Association of American Physicians, Atlantic City, May 3-4. Dr. F. W. Peabody, Boston City Hospital, Boston, Secretary.

California Medical Association, Los Angeles, April 25-28. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.

Connecticut State Medical Society, Hartford, May 25-26. Dr. C. W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Georgia, Medical Association of, Athens, May 11-13. Dr. Allen H. Bunce, 65 Forrest Avenue, Atlanta, Secretary.

Hawaii Territorial Medical Association, Honolulu, May 2-4. Dr. F. J. Pinkerton, 46 Young Building, Honolulu, Secretary.

Illinois State Medical Society, Moline, May 31-June 2. Dr. H. M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Council Bluffs, May 11-13. Dr. T. B. Throckmorton, Bankers Trust Building, Des Moines, Secretary.

Kansas Medical Society, Hutchinson, May 3-5. Dr. J. F. Hassig, 804 Huron Building, Kansas City, Secretary.

Louisiana State Medical Society, New Orleans, April 26-28. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Maine Medical Association, Portland, June 13-15. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 26-28. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.

Massachusetts Medical Society, Boston, June 6-8. Dr. W. L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, Washington, D. C., May 16-17. Miss Sue Biethan, General Library, University of Michigan, Ann Arbor, Sec'y.

Medical Women's National Association, Washington, D. C., May 15-17. Dr. Maud Parker, Medical Dental Building, Seattle, Secretary.

Michigan State Medical Society, Mackinac Island, June 14-17. Dr. F. C. Warnshuis, Grand Rapids National Bank Bldg., Grand Rapids, Sec'y.

Mississippi State Medical Association, Vicksburg, May 10-12. Dr. T. M. Dye, McWilliams Building, Clarksdale, Secretary.

Missouri State Medical Association, Sedalia, May 2-5. Dr. E. J. Goodwin, 901 Missouri Building, St. Louis, Secretary.

National Association for the Study of Epilepsy, Cincinnati, May 30-31. Dr. A. L. Shaw, 108B Olbiston Building, Utica, N. Y., Secretary.

National Tuberculosis Association, Indianapolis, May 23-26. Dr. G. M. Kober, 1819 Q. Street, N. W., Washington, D. C., Secretary.

Nebraska State Medical Association, Lincoln, May 10-12. Dr. R. B. Adams, McKinley Building, Lincoln, Secretary.

New Jersey, Medical Society of, Atlantic City, June 9-11. Dr. J. B. Morrison, 66 Milford Avenue, Newark, Secretary.

New Mexico Medical Society, Carlsbad, May 9-11. Dr. C. M. Yater, 310 N. Richardson Avenue, Roswell, Secretary.

New York, Medical Society of the State of, Niagara Falls, May 9-12. Dr. D. S. Dougherty, 2 East 103d Street, New York, Secretary.

North Dakota State Medical Association, Grand Forks, June 1-2. Dr. J. G. Lamont, San Haven, Acting Secretary.

Ohio State Medical Association, Columbus, May 10-12. Mr. Don K. Martin, 131 East State Street, Columbus, Executive Secretary.

Oklahoma State Medical Association, Muskogee, May 4-6. Dr. C. A. Thompson, 609 Barnes Building, Muskogee, Secretary.

Rhode Island Medical Society, Providence, June 2. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

South Dakota State Medical Association, Huron, May 3-5. Dr. John F. D. Cook, Langford, Secretary.

Texas, State Medical Association of, El Paso, April 26-28. Dr. Holman Taylor, 207½ West 11th Street, Fort Worth, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Ophthalmology, Chicago

10: 81-160 (Feb.) 1927

Retinosis, Retinitis Externa and Choroiditis. M. U. Troncoso, New York.—p. 81.
Contact Localization of Intra-Ocular Foreign Bodies. J. M. Patton, Omaha.—p. 96.
Annular Malignant Melanoma of Iris; Ring Sarcoma. W. R. Murray, Minneapolis.—p. 101.
Ophthalmic Plastic Surgery. W. R. Parker, Detroit.—p. 109.
Conjunctivoplasty in Corneal Ulcer. J. L. McCool, Portland, Ore.—p. 113.
Traumatic Lesions of Optic Pathways: Case. J. S. Somberg, New York.—p. 115.
Panophthalmitis, Evisceration, Sympathetic Ophthalmia. W. E. Shahan, St. Louis.—p. 120.
Modified Lagrange Operation for Glaucoma. J. Whitaker, Miami Beach, Fla.—p. 124.
Furuncle of Lacrimal Caruncle. W. H. Crisp, Denver.—p. 125.
Conjunctivitis and Dermatitis Due to Butyn. A. N. Lemoine, Kansas City.—p. 125.
Shadow Test. C. A. March, Buffalo.—p. 126.

American Journal of Roentgenology and Radium Therapy, New York

17: 1-200 (Jan.) 1927

Effects of Primary and Secondary Roentgen Rays on Skin of Tadpole. H. A. Colwell and M. S. Thomson, London.—p. 1.
Physical Characteristics of Sources of Ultraviolet Light for Heliotherapy. M. Petersen, New York.—p. 19.
Study of High Colonic Irrigations as Used in Therapy of Subacute and Chronic Arthritis. R. G. Snyder and S. Fineman, New York.—p. 27.
Roentgen-Ray Diagnosis of Foreign Bodies in Esophagus. W. F. Manges, Philadelphia.—p. 44.
Roentgenologic Demonstration of Dermoid Cyst with Extensive Displacement of Gastro-Intestinal Tract. H. Fried, New York.—p. 51.
Roentgen-Ray Treatment of Lesions of Lymphoid Tissue. W. A. Evans and T. Leucutia, Detroit.—p. 54.
Carcinoma of Mouth: Types and Degrees of Malignancy. A. C. Broders, Rochester, Minn.—p. 90.
Certain Benign Tumors of Oral Cavity. F. M. Johnson, Atlanta, Ga.—p. 93.
Repair of Defects Caused by Surgery and Radium in Cancers of Hand, Mouth and Cheek. V. P. Blair, St. Louis.—p. 99.
Properties of Intensifying Screens. F. E. Swindells, Towanda, Pa.—p. 115.
Simple Safety Device for Water Cooled Deep Therapy Tubes. E. A. Pohle, Ann Arbor, Mich.—p. 119.

American Journal of Syphilis, St. Louis

11: 1-164 (Jan.) 1927

*Tryparsamide in Neurosyphilis. S. I. Schwab and L. D. Cady, St. Louis.—p. 1.
*Use of Plasmodium Vivax in Treatment of Cerebrospinal Syphilis. J. H. St. John, Washington, D. C.—p. 14.
*Racial Prospect of General Paralysis. L. Kanner, Yankton, S. D.—p. 23.
*Treatment of General Paralysis. J. A. Jackson and G. B. M. Free, Danville, Pa.—p. 31.
Clinical Differentiation Between Early and Late Manifestations of Syphilis of Nervous System. E. D. Fisher, New York.—p. 35.
*Sugar and Chloride Content of Cerebrospinal Fluid in Neurosyphilis. S. W. Becker, Rochester, Minn.—p. 37.
*Iodides Intravenously as Adjunct to Syphilis Therapy. L. L. Schwartz and G. J. Busman, Pittsburgh.—p. 51.
*Incidence of Syphilis in Bronchial Asthma. M. A. Ramirez and A. V. St. George, New York.—p. 59.
*Spirochetal Bronchitis Successfully Treated with Arsphenamine. J. W. Visher, Twin Falls, Idaho.—p. 65.
*Primary Manifestations of Syphilis in Women. P. F. Stookey, Kansas City, Mo.—p. 68.
*Effect of Treatment of Syphilitic Pregnant Woman on Incidence of Congenital Syphilis. D. L. Belding, Boston.—p. 73.
*Bismuth Absorption, Distribution and Elimination: I. Insoluble Bismuth Preparations. O. M. Gruhzit, F. H. Tendick and J. A. Sultzaberger, Detroit.—p. 87.
*Id.: II. Water-Soluble Sodium Bismuth Thioglycollate. O. M. Gruhzit and J. A. Sultzaberger, Detroit.—p. 103.
Unrecognized Syphilitic Myocarditis. C. E. Henry, Minneapolis.—p. 116.
Bone Changes in Congenital Syphilis. J. W. Lindsay, E. C. Rice and M. A. Selinger, Washington, D. C.—p. 118.
Inhalation of Perfume or Smelling Salts During Administration of Neo-Arsphenamine to Prevent Its Disagreeable Odor. E. G. Ballenger and O. F. Elder, Atlanta, Ga.—p. 127.
*Complement Fixation Reaction in Tertiary Syphilis. H. B. Decker, Camden, N. J.—p. 128.
*Comparison of Kahn and Kolmer Tests. S. W. Becker, Rochester, Minn.—p. 131.
*Comparison of Kahn, Meinicke and Ruediger-Wassermann Test. E. H. Ruediger, Hollywood, Calif.—p. 140.
*Use of Isopropyl Alcohol in Preparation of Wassermann Antigens. R. M. Isham, Okmulgee, Okla.—p. 146.

Tryparsamide Therapy of Neurosyphilis.—The use of tryparsamide in neurosyphilis has proved superior to standard methods of treatment in the experience of Schwab and Cady. Sixty-eight per cent of the patients with general paralysis have been restored or kept at some economic standard of efficiency. Clinically, in about 78 per cent of the cases, the progress of the disease was arrested or improved.

Malaria Treatment of Cerebrospinal Syphilis.—In three cases of general paralysis under St. John's observation for a period of one year after treatment with malaria, there was neither improvement nor further deterioration. Attention is called to the possible value of *Anopheles punctipennis* as an experimental vector of tertian malaria.

Racial Prospect of General Paralysis.—A review of known facts has convinced Kanner that the distribution of general paralysis among the various nations and races tends to show that this disease forms only an episode in the historical course of syphilis. It takes a period of from 200 to 300 years after the infection of a nation with syphilis until general paralysis makes its first appearance among the members of this nation. General paralysis stays with a nation for about two centuries, during which period its frequency increases gradually. After this period, a gradual decrease in the number of paralytic patients is noticeable. There is ground for the belief that the population of central and western Europe and the white inhabitants of America approach the stage of decline of general paralysis among their members.

Treatment of General Paralysis.—Jackson and Free urge that the incipient case should be first treated with mercury, arsenic and iodide, and if improvement does not result, this treatment should be followed with malaria. The hopes of the hospital (mental) patient thus far rest on the intelligent use of the malarial treatment, and this is repeated or followed with arsenicals if improvement does not occur.

Cerebrospinal Fluid Sugar in Neurosyphilis.—Becker states that there is a definite but small decrease, with rather wide range of values, in the reducing substance of the cerebrospinal fluid in cases of neurosyphilis, as determined by the Rothberg and Evans modification of the Folin and Wu method. Simultaneous determination of blood sugar is of assistance in a small percentage of cases. There is a slight normal variation in the content of sugar in the spinal fluid but not as great as in the blood sugar. The length of time without food made some difference in the level of sugar in the blood, but apparently none in that of the cerebrospinal fluid. There is a slight tendency toward low values for sugar in the spinal fluid along with high cell count and in cases with colloidal benzoin reaction in the first zone. The regular comparative tabulations of Wittgenstein could not be duplicated. Alimentary hyperglycemia up to 185 mg. did not produce any increase of sugar in the spinal fluid. The sugar content did not alter under treatment in cases followed as long as five months. The extremely low values for sugar in the spinal fluid in cases of neurosyphilis, and the marked rise following treatment, as noted by some authors, could not be confirmed. Information was not obtained that would definitely aid in prognosis, although observation has lasted one and one-half years. There is a variation in the chloride content of the cerebrospinal fluid which is not as great as in the chlorides of the whole blood. In all the cases of neurosyphilis, the spinal fluid showed a normal chloride content.

Iodides Intravenously in Syphilis.—The therapeutic results obtained by Schwartz and Busman by the administration of a 10 per cent sodium iodide solution intravenously, daily, in doses of from 25 to 100 cc., produced clinical results which

could not be duplicated by the administration of either potassium or sodium iodide by mouth.

Incidence of Syphilis in Asthma.—Ramirez and St. George reviwed the records of 1,000 cases of bronchial asthma, and have reached the conclusion that syphilis is not an etiologic factor in true asthma. Antisyphilitic treatment does not influence asthma when the two diseases coexist.

Neoarsphenamine in Spirochetal Bronchitis.—A case of purulent bronchitis due to Vincent's spirochete and to the fusiform bacillus is reported by Visher, in which prompt recovery followed the administration of neoarsphenamine intravenously. Three injections (0.15, 0.3 and 0.6 Gm.) were given in the course of two weeks with the result that the cough abated, the râles disappeared, the sputum became scanty and normal in character, and fusiform bacilli or spirochetes could no longer be found.

Primary Manifestation of Syphilis in Women.—Stookey contends that the absence of the satellite bubo in every case of early secondary syphilitic eruption is strong presumptive evidence that the primary chancre is located on the cervix uteri. A marked generalized edema induration encountered in the male, without definite ulceration of the mucous membrane, is a common manifestation of primary syphilis. The diagnosis of primary syphilis of the cervix uteri, in the absence of secondary manifestations, is essentially a laboratory procedure.

Effect of Treatment of Syphilitic Pregnant Women on Incidence of Congenital Syphilis.—A survey made by Belding of the children of untreated women who had a positive Wassermann reaction during pregnancy indicated that the majority of these children did not show any evidence of early congenital syphilis. In 150 serum-positive women who did not receive treatment during pregnancy, 61.3 per cent of the conceptions resulted in living, apparently nonsyphilitic children; in eighty-seven, who in addition showed evidence of clinical syphilis, 42.4 per cent, and in sixty-three, who had only serum-positive syphilis, 87.4 per cent. Women who did not show any clinical evidence of syphilis, and who had had the disease more than five years, seldom gave birth to a syphilitic child. A group of forty women, who resembled most closely the eighty-seven untreated women with clinical syphilis in respect to the previous effect of the disease, received antisyphilitic treatment during the gestation period. Living, apparently nonsyphilitic children resulted in 67.5 per cent of the conceptions. The most striking evidence of the effect of treatment was the lowering of the fetal death rate.

Absorption Rate of Insoluble Bismuth Preparations.—The rates of absorption of three insoluble bismuth preparations, bismuth salicylate, bismuth potassium tartrate and bismuth oleate, were studied by Gruhzit et al. It is suggested that bismuth salicylate is absorbed more rapidly than either bismuth potassium tartrate or bismuth oleate and is, therefore, more adapted to the treatment of syphilis than either tartrates or oleates.

Absorption Rate of Soluble Bismuth Preparation.—The rate of absorption, distribution in the body and elimination of a new soluble sodium bismuth thioglycollate compound has been studied by Gruhzit and Sultzaberger. The absorption from the site of injections is complete in about two hours. A rapid distribution of bismuth takes place through the body, and it remains in the blood stream for about seventy-two hours. At the end of about six hours, analyses of organs showed that bismuth had reached every organ and every tissue in the body. The concentration of the bismuth in the various organs was about the same at the end of six hours as at the end of twenty-five days after the injection. The bismuth appeared to be deposited in the bone in higher concentrations than in other organs, except the kidneys and spleen. The rate of bismuth thioglycollate elimination in the urine and feces differed widely from that of insoluble bismuth preparations. In cases of the former, the peak of elimination was reached in seventy-two hours. In the case of insoluble bismuth preparations, such as bismuth salicylate, the peak of elimination was reached toward the end of the first or the beginning of the second week.

Complement Fixation Reaction in Tertiary Syphilis.—In 332 cases diagnosed as tertiary syphilis and tested by Decker, 283 (85.2 per cent) gave two positive complement fixation tests before treatment. Twenty-five cases (7.5 per cent) gave a first positive and a second negative test. Of these cases, two (0.6 per cent) were proved nonsyphilitic, three (0.9 per cent) were doubtful, and the remaining twenty (6 per cent) were positively syphilis. Twenty-four patients (7.2 per cent) gave two negative complement fixation tests in proved syphilis.

Comparison of Kahn and Kolmer Tests.—Becker regards the Kahn precipitation test as a valuable adjunct to the multiple procedure diagnostic attack of Stokes, but does not believe that it replaces the Kolmer complement fixation test, nor does the latter replace the precipitation test. To obtain the utmost in serologic diagnosis, both should be performed. Utilization of the Kahn precipitation reaction in selected cases has proved a valuable aid to the clinical syphilologist in diagnosing syphilis and passing judgment on the question of further treatment. The Kahn precipitation test gives more uniform results in repeated examinations, and is more difficult to reverse from positive to negative by treatment. It shows a greater tendency to accentuation by treatment than the Kolmer test.

Comparison of Kahn, Meinicke and Ruediger-Wassermann Tests.—Parallel tests were done by Ruediger on 311 consecutive specimens. Of these 311 specimens, 211 gave negative results by all three methods, and 100 gave positive results by one or more methods. Of the 100 specimens that gave positive results by one or more methods, all gave positive results by the Ruediger-Wassermann test, sixty-nine gave positive results by the Kahn test and sixty-two gave positive results by the Meinicke test. The Kahn test missed 31 per cent of the positives, and the Meinicke test missed 38 per cent of the positives. None of these were shown to be free from syphilis; in fact, the most obscure of these cases were suggestive of syphilis.

Isopropyl Alcohol Preparation of Wassermann Antigens.—Isham considers isopropyl alcohol as superior to ethyl alcohol for the preparation of Wassermann antigens of the simple alcoholic type. It yields a product of superior antigenic power, and shows relatively less anticomplementary action. Isopropyl alcohol is superior to ethyl alcohol for the production of acetone insoluble antigens because it gives a more complete extraction of the acetone insoluble lipoids of normal tissues. The antigen produced is equal in antigenic power to that produced by use of ethyl alcohol, and is somewhat superior as regards anticomplementary behavior with normal serums. The use of isopropyl alcohol for this purpose is also recommended over the use of tax-paid ethyl alcohol, because it is less costly and is not subject to troublesome regulations.

American Journal of Tropical Medicine, Baltimore

7: 1-70 (Jan.) 1927

*Pathology of Blackwater Fever. G. H. Whipple, Rochester, N. Y.—p. 1.
*Incidence of Gametocytes in Untreated and Briefly Treated Malaria. H. C. Clark, New York.—p. 15.
*Tropical Splenomegaly of Strong and Shattuck. M. F. Boyd, New York.—p. 21.
*Kala-Azar. R. Brooke, Ancon, C. Z.—p. 27.
*Value of Cultural Methods in Surveys for Parasitic Amebae of Man. C. F. Craig and J. H. St. John, Washington, D. C.—p. 39.
*Pulmonary Acariasis in Monkeys. D. M. Gay and A. Branch, Trudeau, N. Y.—p. 49.
*Tests of Hookworm Remedies on Man. C. Manalang.—p. 57.
*Blood Serum Calcium in Leprosy. I. I. Lemann, R. T. Liles and F. A. Johansen, New Orleans.—p. 61.
*Tuberculosis: VIII. Skin Reacting Substance in Tuberculous Serum. F. Eberson, San Francisco.—p. 127.

Pathology of Blackwater Fever.—Whipple reports on the histologic study of two cases of blackwater fever which he has selected from material collected and studied in the Ancon Hospital Laboratory more than fifteen years ago, and reported on at that time in a periodical now extinct ("Malaria"). The cases cited illustrate several characteristic types of the disease. The original paper contained a general review of the various theories proposed to explain this obscure disease, a considerable series of carefully chosen necropsy cases, a

group of photographs illustrating the typical histologic lesions, and a general discussion and summary of results.

Effect of Treatment on Gametocytes in Malaria.—Clark believes that the degree and promptness of gamete invasion of the peripheral blood stream following a brief, vigorous use of quinine in astivo-autumnal malarial fever is not very generally known, and that the long period over which many treated cases show a persistence of gametes in the peripheral blood is also not widely understood. These are very important facts to be kept in mind by those who are attempting to control malaria in the tropics.

Tropical Splenomegaly.—Boyd disagrees with the opinions expressed by Strong and Shattuck in the medical report of the Hamilton Rice seventh expedition to the Amazon regarding splenomegaly, and details his reasons for disagreement.

Kala-Azar in Panama.—Brooke reports a case of kala-azar seen in Panama. The diagnosis was corroborated by finding the parasites in the material obtained by splenic puncture. Treatment with antimony and potassium tartrate was highly satisfactory.

Cultivation of Intestinal Protozoa.—Craig and St. John report on a survey for intestinal protozoa, in which the results obtained with the cultivation of the various organisms were compared with other methods of diagnosis. Cultural methods were found to be superior, for diagnostic purposes, to either the sedimentation method or the direct examination of the feces, when only one microscopic preparation is examined. The Locke serum medium gave a larger percentage of positive results than did any of the other methods employed, and neither coagulated egg nor a solid substratum of any kind is necessary for success in surveys for the intestinal amebas. The successful results with a medium composed of seven parts of physiologic sodium chloride solution and one part of inactivated human blood serum demonstrate that none of the chemicals in either Locke's or Ringer's solution, with the exception of sodium chloride, were essential in the medium used in the survey, and that the continued cultivation of *Endameba histolytica* over an indefinite period of time is possible in this simple medium.

Pulmonary Acariasis in Monkeys.—Pulmonary acariasis was found by Gay and Branch at necropsy twenty times in a series of twenty-five *Macacus rhesus* monkeys when death was due to other causes. The mites were found encapsulated in small subpleural vesicles, causing a chronic benign infection. The lesions may be distinguished grossly from tubercles by being impalpable, level with the lung surface or slightly umbilicated, unassociated with pleural reaction, and yellowish gray without a milky, translucent area.

Testing Hookworm Remedies.—The drugs tested by Manalang against hookworms were carbon tetrachloride, oil of chenopodium and thymol. His figures confirm the superiority of carbon tetrachloride over oil of chenopodium as a remedy against hookworms in man. Only one patient was treated with thymol. The results tally well with the known efficacy of this drug.

Blood Serum Calcium in Leprosy.—Lemann et al. found the blood serum of fifty-four lepers normal in amount. A relationship did not exist between the calcium content of the blood and bone absorption. Administration of chaulmoogra oil did not affect the level of the blood calcium.

Skin Reacting Substance in Tuberculosis Serum.—A heat-sensitive skin-reacting substance of the nature of a toxin has been identified by Eberson in the blood serum of tuberculous patients and guinea-pigs. It is not found in normal human or guinea-pig serum. The substance does not behave like tuberculin or its related elements which are heat-resistant, and it exists independently of these. It is present in largest amounts in far-advanced tuberculous infections with profound toxemia, and is apparently destroyed by heating at from 60 to 65 C. for from twenty to forty-five minutes. In normal animals this unheated substance gives a positive skin test, owing to its interaction with normal antibodies for tubercle products. The method devised for identifying this specific skin-reacting substance depends, in principle, on a living "indicator," the guinea-pig, which measures related or identical elements in the serum to be tested.

Archives of Neurology and Psychiatry, Chicago

17: 151-284 (Feb.) 1927

*Adhesive Spinal Arachnoiditis Simulating Spinal Cord Tumor. B. Stookey, New York.—p. 151.
*Differential Diagnosis of Tumors Primarily Pineal and Primarily Pontile. G. Horrax, Boston.—p. 179.
Method of Measuring Cerebral and Cerebellar Cortical Surfaces. W. M. Kraus and M. W. Ditto, New York.—p. 193.
*Involvement of Central Nervous System Secondary to Primary Carcinoma of Lung. H. L. Parker, Rochester, Minn.—p. 198.
*General Paralysis: Histopathology of Basal Ganglions, Corpus Callosum and Dentate Nucleus in Four Cases. T. L. Houlton, Omaha.—p. 214.
*Tuberculoma en Plaque. I. Pardee and L. C. Knox, New York.—p. 231.
Irresistible Mastication During Epidemic Encephalitis. P. J. Zentay, St. Louis.—p. 239.

Adhesive Spinal Arachnoiditis Simulating Spinal Cord Tumor.—There is a group of patients with the clinical picture and course of spinal cord tumor in whom, at operation, neither neoplasm of the spinal cord nor other pathologic change, except adhesions of the arachnoid to the spinal pia and to the dura, is to be found. These adhesions vary from rather fine discrete bands to adherent processes completely surrounding the spinal cord and producing complete obstruction of the subarachnoid spaces. In both varieties of adhesions marked disturbances in spinal cord function have been found, and the evolution of the clinical signs has been identical, in most respects, with that of true spinal cord tumors. Stookey thinks the term arachnoiditis adhesiva circumscripta spinalis is, perhaps, the most satisfactory one to designate the entire group, if it is supplemented by the designation arachnoiditis adhesiva diffusa spinalis, for the process may be localized or diffuse. Four cases are the basis for a dissertation on this subject.

Diagnosis of Pineal and Pontile Tumors.—Thirty cases of tumor in the brain stem, which were verified by necropsy, are analyzed by Horrax. Fifteen of the thirty tumors originated from the pineal body, and involved chiefly that portion of the midbrain just below this structure in the region of the corpora quadrigemina. Fifteen tumors were largely or wholly within the pons. The initial symptoms in all the pineal group were those due to increased intracranial pressure, most frequently headache, but occasionally failing vision and vomiting. Only one third of the pontile cases began in this manner. When difficulty in hearing existed, it was always recognized subjectively as bilateral by the pineal group, and always referred to a single ear by the pontile tumors. Pressure on the sensorimotor pathway was manifested only twice, and that very slightly, in the pineal group. In the pontile cases, 60 per cent presented an outspoken hemiplegia or hemihypesthesia which when present was always opposite a facial weakness, if such existed. Conjugate movement of the eyeballs upward above the horizontal plane was impossible in nearly one half (47 per cent) of the pineal cases. Peripheral involvement of the fifth, seventh, ninth and twelfth cranial nerves was practically absent in the pineal cases, and relatively frequent in the pontile. Pseudocerebellar signs were present and outspoken in 90 per cent of the total thirty patients.

Metastases to Central Nervous System from Primary Lung Cancer.—In four cases of primary carcinoma of the lung with invasion of the brain, meninges, spine and nerve roots, which are discussed by Parker, the carcinoma gave few signs, and the involvement of the nervous system was the most striking feature in each case. The clinical and necropsy records in each case illustrate the great variability in the course and tendencies of the disease and the difficulties in diagnosis. The study demonstrates the necessity of a complete general physical examination in every case of disease of the central nervous system.

Microscopic Changes of Brain in General Paralysis.—The microscopic changes of the basal ganglions, corpus callosum and dentate nucleus in four cases of general paralysis are reported on by Houlton. He found that definite pathologic changes occur in the basal ganglions in ordinary advanced

cases of general paralysis. These changes are similar to and quite as severe as those found in the cortex. The brain tissue bordering the ventricles shows greater pathologic changes than the tissue at a distance from it. The etiologic factors in the origination of the speech disturbance, the expressionless facies and the fine tremors about the eyes and mouth found in cases of general paralysis may be the pathologic changes in the cell of the basal ganglions.

Tuberculoma en Plaque.—The case presented by Pardee and Knox was watched from its incipience, with an intermission, to its termination, for a period of five years. Its symptomatology of jacksonian attacks was sufficiently confusing in its earlier stages to make a positive diagnosis impossible, while the physical signs of right-sided hyperparesthesia and hyperreflexia were so variable that the inevitable conclusion was made that it was a case of hystero-epilepsy. Apparently, because of the very superficial cortical involvement, hardly penetrating through the gray matter, the disturbance of the reflexes was slight; the reflexes were variable in their intensity with a generalized hyperreflexia and, if anything, a tendency to exaggeration on the right side. This was noted especially after the attacks. Inexhaustible clonus was only once obtained on the right side, and a Babinski sign was never surely elicited until the last admission when the patient was practically moribund. The macroscopic appearance of the tumor was so suggestive of a glioma at necropsy that until sections were examined it was so considered, until the well known giant cell reaction of tuberculosis was observed.

Archives of Ophthalmology, New York

56: 1-103 (Jan.) 1927

Exfoliation of Lens Capsule. A. N. Alling, New Haven, Conn.—p. 1.
Endophthalmitis from Retained Foreign Body Phacocyst. D. T. Vail, Jr., Cincinnati, and F. H. Verhoeff, Boston.—p. 5.
Essential Progressive Atrophy of Iris. G. E. de Schweinitz, Philadelphia.—p. 10.
Effective Treatment for Sympathetic Uveitis. F. H. Verhoeff, Boston.—p. 28.
*Leprosy of Eye in Hawaiian Islands. F. J. Pinkerton, Honolulu.—p. 42.
Changes in Refraction. C. F. Clark, Columbus, Ohio.—p. 52.

Leprosy of Eye.—Of 512 lepers seen by Pinkerton, 433 had some lesion of the eye or a defect of vision attributable to leprosy, chiefly corneal changes and exudative iritis. Blindness, in one or both eyes, is a very frequent complication; so, too, are orbicular paralyses. Pinkerton feels that much can be done in these cases if treated early and well. It is interesting to note that cocaine instilled into the conjunctival sac is unsatisfactory as an anesthetic in leprosy, and that leprous patients seem to be immune to the ordinary pus producing organisms.

Arch. of Physical Therapy, X-Ray, Radium, Omaha

8: 53-99 (Feb.) 1927

Physics and Uses of High Frequency Currents. W. B. Chapman, Carthage, Mo.—p. 53.
Roentgen-Ray Therapy. R. W. Fouts, Omaha.—p. 56.
Leg Ulcers: Treatment by Ultraviolet Radiation. A. E. Schiller, Detroit.—p. 61.
Local and Regional Anesthesia in Surgical Diathermy. A. E. Jones, Chicago.—p. 69.
Surgical Diathermy Technic. G. Kolischer, Chicago.—p. 74.
Comparative Value of Roentgen Rays, Diathermy and Radium in Urology. E. W. Hirsch, Chicago.—p. 82.

Arkansas Medical Society Journal, Little Rock

23: 151-162 (Feb.) 1927

Orthopedic Surgery. F. W. Carruthers, Little Rock.—p. 151.
Atypical Pneumonia. W. M. Majors, Lafe.—p. 154.

Boston Medical and Surgical Journal

196: 297-340 (Feb. 24) 1927

Modern Conceptions of Upper Abdominal Disease. J. B. Deaver, Philadelphia.—p. 297.
Minot and Murphy Diet for Pernicious Anemia. E. A. Nicholls, Boston.—p. 302.
*Use of O-Iodoxybenzoic Acid in Arthritis. M. Smith, Boston.—p. 305.
Psychoses with Multiple Sclerosis. S. F. H. Howes, Harding, Mass.—p. 310.
Puerperal Infection in Massachusetts. A. D. Hamblen, Boston.—p. 315.

Use of O-Iodoxybenzoic Acid in Arthritis.—As observed by Smith in thirty-three cases of arthritis, this drug appears to have three main actions: analgesic, relief of muscle spasm and reduction of swelling. The clinical action of the drug resembles very much that of salicylates, excepting that o-iodoxybenzoic acid has many times the potency possessed by the salicylates. The similarity of action and structure of this drug to salicylates, with its marked difference in potency, suggests that other reactive derivatives of the salicylates may exist which might be used with equally beneficial results and which may produce less severe reaction intravenously. Another point which the action of the drug would indicate is that it should be useful in any form of arthritis in which pain, swelling or muscle spasm exists. These symptoms and signs should be the indication for the drug rather than the type of arthritis. The drug may be administered intravenously, in from 0.5 to 1.5 Gm. doses, or by mouth in 2 or 3 per cent solution in pill or capsule form, on an empty stomach, with two glasses of water. When given intravenously it produces a severe constitutional reaction, whereas administration by mouth is attended with virtually no discomfort.

Georgia Medical Association Journal, Atlanta

16: 40-77 (Feb.) 1927

Tropical Sprue. R. S. Leadingham, Atlanta.—p. 40.
Case of Conjunctivitis Tularensis. Z. W. Jackson, Atlanta.—p. 44.
Deafness. D. Roy, Atlanta.—p. 48.
Chronic Endocervicitis. C. H. Richardson, Jr., Macon.—p. 55.
Specific Treatment of Lobar Pneumonia. W. C. Cook, Emory University.—p. 59.
My Experiences Abroad. L. Holtz, Atlanta.—p. 62.
Diathermy in Urology: Renal Colic. W. A. Upchurch and S. T. Brown, Atlanta.—p. 63.

Indiana State Medical Association Journal, Ft. Wayne

20: 47-88 (Feb.) 1927

Prospects of Prostatic. A. Randall, Philadelphia.—p. 47.
Roentgenologic Evidence of Nasal Sinus Disease: Importance in Post-ocular Affections. Cole, Beeler and Smith, Indianapolis.—p. 55.
Regional Anesthesia in Surgery. W. R. Davidson, Evansville.—p. 62.
Acute Otitis Media. D. O. Kearby, Indianapolis.—p. 64.
Physicians as Creditors. W. A. Doeppers, Indianapolis.—p. 67.

Iowa State Medical Society Journal, Des Moines

17: 39-74 (Feb.) 1927

Surgery of Prostate. V. C. Hunt, Rochester, Minn.—p. 39.
Doctors and Law. H. DeReus, Pella.—p. 42.
Iowa Health Notes. H. Albert, Des Moines.—p. 49.
Iowa's Health. J. Wallace, Des Moines.—p. 51.
Right Sided Abdominal Pain. A. A. Schultz, Fort Dodge.—p. 53.
Appendix in Right Inguinal Fossa. C. S. Hickman, Centerville.—p. 57.

Journal of Bacteriology, Baltimore

13: 73-146 (Feb.) 1927

Paratyphoid B—Suipestifer Group of Bacteria: Differentiation. P. R. Edwards and L. F. Rettger, New Haven, Conn.—p. 73.
Microbic Heredity: XII. Microbic Dissociation in Vivo; Case of Subacute Septicopyemia. R. R. Mellon, Rochester, N. Y.—p. 99.
Essential Food Substances in Soil. J. R. Sanborn, Amherst, Mass.—p. 113.
Differentiation of Intestinal Organisms by Means of Semifluid Sugar Mediums. L. B. Bibb, Washington, D. C.—p. 123.
Cultural and Antigenic Studies on Salmonella Gallinarum and Salmonella Pullorum. H. G. May and K. Goodner, Kingston, R. I.—p. 129.

Journal of Comparative Neurology, Philadelphia

42: 349-476 (Feb. 15) 1927

Histologic Experiments with Brain of Some Rodents. A. B. D. Fortuyn, Peking.—p. 349.
Studies on Visceral Bulbospinal Pathway in Cat and Guinea-Pig. W. F. Allen, Portland, Ore.—p. 393.
Relation of Light Intensity of Retinal Pigment Migration in Frog. D. C. Smith, Cambridge, Mass.—p. 457.

Journal of Comparative Psychology, Baltimore

7: 1-92 (Feb.) 1927

Efficiency of Eye Under Different Intensities of Illumination. E. W. Atkins, Baltimore.—p. 1.
Regulation of Behavior in Water-Mites and Other Arthropods. W. E. Agar, Melbourne, Australia.—p. 39.
Stimulus for Visual Discrimination Habit. R. M. Hubbard, Minneapolis.—p. 75.

Journal of Industrial Hygiene, Baltimore

9: 43-52 (Feb.) 1927

*Chronic Poisoning by Tin and Its Salts. F. G. Pedley, New York.—p. 43.
Manganese: Failure of Its Oral Administration to Affect Health of Birds. W. F. von Oettingen and T. Sollmann, Cleveland—p. 48.
Ventilation and Heating of Factories. H. M. Vernon and T. Bedford, London.—p. 51.
*Benzene Poisoning. C. E. A. Winslow, New Haven, Conn.—p. 61.

Poisoning by Tin.—Poisoning by tin or its salts is a very rare occurrence in industry. Pedley says that a search of the literature fails to reveal the report of a single case. A possible case is reported in which a positive diagnosis could not be made. The patient had a variety of complaints, but pain in the throat, heaviness in the stomach, and a feeling of chilliness were the symptoms on which he laid most stress. At two examinations, traces of tin were reported in both the urine and the feces. Pedley says it is not reasonable to attribute poisonous properties to tin when only three cases of alleged chronic poisoning are on record.

Benzene Poisoning.—Winslow asserts that field studies have indicated that the use of benzene as an industrial solvent is attended with health hazards which can be avoided only by the provision of elaborate local exhaust ventilation, and by the maintenance of a comprehensive system of medical supervision. On the other hand, laboratory investigations make it clear that certain of the higher homologues of benzene, such as toluene xylene and Hiflash naphtha, are relatively free from the special hazards which attend the use of benzene itself. These substances, in large doses, are even more powerful narcotics than benzene, but their low volatility and marked odors make it highly unlikely that they will occur in workroom air in sufficient concentration to produce effects of this sort. On the other hand, they are almost wholly lacking in those specific destructive effects on the nerve tissue and, above all, on the blood forming organs, so characteristic of benzene. Under ordinary conditions of use, and in any concentrations in which they would be likely to occur in workroom air, these substances appear to be relatively harmless. It is urged that the serious attention of manufacturers now using benzene should be given to the possibility of substituting one of these substances, or other relatively harmless substances, whenever the conditions of a given manufacturing process make it possible to do so.

Journal of Infectious Diseases, Chicago

40: 313-388 (Feb.) 1927

*Pathogenicity of Bacillus Subtilis. W. J. Bais, Amsterdam, Holland.—p. 313.
Immunologic Behavior of Mucoids. J. H. Lewis and H. G. Wells, Chicago.—p. 316.
Immunologic Reactions of Globulins from Seeds of Leguminous Plants: IX. H. G. Wells and J. H. Lewis, Chicago, and D. B. Jones, Washington, D. C.—p. 326.
Bacterial Filters. S. P. Kramer, Washington, D. C.—p. 343.
*Occurrence of Bacterium Coli of Intestinal Origin on Hands of Food Handlers. W. A. Buice, H. C. Sehested and R. B. Dienst, Waco, Texas.—p. 348.
Isolation and Cultivation of Bacterium Abortus (Bang). I. F. Huddleson, D. E. Hasley and J. P. Torrey, East Lansing, Mich.—p. 352.
Effect of Type 1 Pneumococcus Culture Broth on Protective Action of Type 1 Antiserum. G. M. Sickles, Albany, N. Y.—p. 369.
*Effect of Zinc in Experimental Syphilis. J. E. Walker, Washington, D. C.—p. 377.
Use of Hydraulic Devices for Obtaining Micromanipulation. F. L. Dunn, Omaha.—p. 383.

Bacillus Subtilis in Gangrenous Lung.—A case of gangrene of the lungs with the isolation of *Bacillus subtilis* in cultures from the blood is reported by Bais. The case occurred in Sumatra.

Bacterium Coli on Hands of Food Handlers.—*Bacterium coli* of intestinal origin was present on the hands of food handlers, while at work, in 8.38 per cent of the 337 tests made by Buice et al.

Effect of Zinc in Experimental Syphilis.—Walker avers that zinc chloride and zinc acetate have therapeutic indexes in experimental syphilis approximating 1, a result somewhat better than that previously obtained by other authors with mercury, and corresponding closely with the effect of simple compounds of vanadium, gold and silver.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

30: 275-350 (Feb.) 1927

*Pharmacology of Ceanothus Americanus: I. Hemodynamics and Effects on Coagulation. J. T. Groot, Chicago,—p. 275.
Standardization of Digitalis by Cat Unit Method. A. McFarlane and G. A. Masson, Edinburgh.—p. 293.
*Ethylene Glycol. I. H. Page, New York.—p. 313.
*Cardiac Effects of Acetanilid, Caffeine and Its Citrate. G. B. Roth, St. Louis.—p. 321.
Quinine. S. Weiss and R. A. Hatcher, New York.—p. 327.
Quinidine. S. Weiss and R. A. Hatcher, New York.—335.
Quinine. R. A. Hatcher and H. Gold, New York.—p. 347.

Pharmacology of Ceanothus Americanus.—*Ceanothus americanus,* a medicinal plant known by many common names, such as Jersey tea and red root, has been used empirically for a long time in the treatment of innumerable ills. It seems to be particularly beneficial in the treatment of hemorrhage, having been used for this purpose as "a strong decoction of the bark of the root or the fresh root itself" applied locally, and "as the tincture of the root bark" given internally. Groot has found that the hydro-alcoholic extract of *Ceanothus americanus,* and also the alkaloids extracted therefrom, have a distinct, constant, though relatively transient hemodynamic action in dogs, lowering the blood pressure when administered intravenously. A distinct coagulative action was also noted. The blood pressure of dogs, normal human beings, and of those surgically or medically ill apparently is not affected.

Ethylene Glycol.—An 80 per cent aqueous solution of glycol (boiling point about 121 C.) was used by Page in his studies. Glycol injected intravenously quickly lowers blood pressure; this is followed by a marked increase in the amplitude of the beat, with either no change or a slight slowing in heart rate and a rise in mean pressure. The respiration is at first markedly increased in rate, followed by slowing and increase in amplitude. Vagotomy followed by glycol initiates violent hyperpneic efforts. Veltmann's statement that glycol is not converted to sugar has been confirmed in dogs made totally diabetic with phlorhizin.

Cardiac Effects of Acetanilid and Caffeine.—Roth asserts that caffeine citrate in 0.05 per cent concentration in a buffered Locke-Ringer's solution (p_H 8.2) primarily depresses the isolated frog's heart and secondarily stimulates it, the primary depression being due to the citrate ion in the preparation. The primary depression of the frog's heart by the caffeine citrate can be antagonized to a great extent by caffeine. The use of caffeine in mixture with acetanilid appears to be valueless as an antagonist to the cardiac depression caused by acetanilid.

Kansas Medical Society Journal, Topeka

27: 37-72 (Feb.) 1927

Influence of Tobacco and Other Extracts on Epithelial Cell. F. C. Helwig, Kansas City.—p. 37.
Meckel's Diverticulum. M. Hall, Topeka.—p. 40.
Fundamentals of Goiter Treatment. R. Oleson, Wichita.—p. 42.

Laryngoscope, St. Louis

37: 79-155 (Feb.) 1927

Intranasal Ethmoid and Frontal Sinus Operation. W. Spielberg, New York.—p. 79.
Self-Retaining Antrum Catheter for Drainage and Irrigation of Maxillary Sinus. M. J. Mandelbaum, New York.—p. 108.
Physiologic Factors in Control of Otitic Meningitis. W. P. Eagleton, Newark, N. J.—p. 113.
Ossiculectomy in Treatment of Chronic Purulent Otitis Media. M. D. Reese, Philadelphia.—p. 121.
Evolution of Submucous Resection: New Technic. D. T. Atkinson, San Antonio, Texas.—p. 132.
Spontaneous Rupture of Retropharyngeal Abscess; Flooding of Tracheobronchial Tree; Tracheotomy; Aspiration; Recovery. M. C. Myerson, New York.—p. 136.
False Lung Abscess and Lipiodol. H. P. Mosher, Boston.—p. 138.

Medical Journal and Record, New York

125: 149-224 (Feb. 2) 1927

Stomatologic Education and Public Health. G. R. Satterlee, A. J. Asgis and E. B. Hardisty, New York.—p. 149. (To be Cont'd.)
Cancer: IX. Elementary States and Conditions of Matter. W. Meyer, New York.—p. 153.

Influence of Rectal Disease on Genito-Urinary Organs. C. J. Drueck, Chicago.—p. 157.
Biologic Methods Against Process of Old Age. E. Steinach, Vienna.—p. 161.
Multiple, Deep, Nonpainful Fissures of Tongue. J. A. Buchanan, New York.—p. 164.
Essential Thrombocytopenic Purpura. H. Koster, New York.—p. 167.
Renal Papillary Hemorrhage. M. Muschat, Philadelphia.—p. 170.
Phototherapy. H. Goodman, New York.—p. 175.
Neurotic Disorders in Early Life. J. P. C. Griffith, Philadelphia.—p. 179.
Tooth Decay and Balanced Metabolism in Infancy and Childhood. G. D. Scott, New York.—p. 186.
Congenital Dislocation of Both Knees. J. Grossmann, New York.—p. 189.
Mental Deficiencies in Consequence of Natal Intracranial Hemorrhage. H. B. Sheffield, New York.—p. 190.
Oxycephaly: Case. J. H. Marcus, Atlantic City, N. J.—p. 192.
Pneumonitis Caused by Vincent's Organisms. J. M. Cahan, Philadelphia.—p. 194.
Cycles of Thought in Biologic Science: I. Mysticisms and Mechanisms in Medicine. J. Wright, Pleasantville, N. Y.—p. 195.

125: 225-296 (Feb. 16) 1927

*Primary Carcinoma of Bronchus with Abscess of Lung. D. H. Ballon, Montreal.—p. 225.
Functional Backache. F. C. Hall, Boston.—p. 228.
Cancer: X. W. Meyer, New York.—p. 233.
*Skeletal and Pulmonary Metastases from Primary Carcinoma of Breast. A. W. Jacobs, New York.—p. 237.
Function of Colostrum. T. S. Harding, Beltsville, Md.—p. 240.
Tooth Decay and Balanced Metabolism in Infancy and Childhood. G. D. Scott, New York.—p. 242.
Stomatologic Education and Public Health. G. R. Satterlee, A. J. Asgis and E. B. Hardisty, New York.—p. 246.
Phototherapy. H. Goodman, New York.—p. 249.
*Ulcerative Colitis of So-Called Nonspecific Types. A. Bassler, New York.—p. 253.
Gastrocolic Fistula Complicating Carcinoma of Stomach. F. C. Hill, Philadelphia.—p. 258.
Cholecystography. S. Moore, St. Louis.—p. 260.
Cholecystography and Biliary Drainage as Aid in Diagnosis of Gallstones and Gallbladder Disease. S. Weiss, New York.—p. 264.
Indications for Partial Gastrectomy. G. de Takats, Chicago.—p. 266.
Did Syphilis Exist in Antiquity? C. G. Cumston, Geneva, Switzerland.—p. 269.

Primary Cancer of Bronchus with Lung Abscess.—Ballon reports the case of a previously healthy man, aged 43, who presented a clinical picture of abscess of the lung which was verified by operation. A bronchoscopic examination, including an injection of iodized oil, performed because of persistence of symptoms, revealed a growth of the left main bronchus, which on pathologic examination was reported as carcinoma.

Skeletal and Lung Metastases from Breast Cancer.—At the aged of 29, Jacob's patient had one breast removed for carcinoma. A lump had been present for seven years. She was apparently well for about a year; then she commenced to lose weight rapidly. On examination, the right lung showed deficient expansion, with impaired resonance on percussion and complete dulness below the eighth rib, and occasional râles. An enlarged liver, with hard edge, was palpable 3 cm. below the costal margin. Roentgenograms of the pelvis revealed metastatic involvement of the left half of the sacrum and left half of the body of the fifth lumbar vertebra and left transverse process; there was also destruction of the lower third of right ileum, involving the acetabulum and extending into the pelvis. Treatment with high voltage roentgen rays was begun. About six years after operation, and more than two years since the manifestation of pulmonary and skeletal metastases, examination of the patient showed her to be in good general condition, gaining in weight and strength, and free from symptoms; she had been doing light work for the past eight months.

Treatment of Ulcerative Colitis.—Bassler favors the medical rather than the surgical treatment of this disease. Transfusions are more helpful in this disease than in any other. Oftimes it means the difference between success and failure in the medical handling, or success in doing an ileosigmoidostomy. He is using more transfusions with simple or immune donors as a method to control the anemia and raise the vitality, and as an alternate procedure to the intravenous mercurochrome injection. The transfusion bucks up the patient and the mercurochrome blocks the infection.

Military Surgeon, Washington, D. C.

60: 121-252 (Feb.) 1927

Experience of Wounded Soldier at Second Battle of Bull Run. J. Tanner.—p. 121.
Hill Diarrhea. P. R. Hawley.—p. 140.
German Sanitation During American Occupation. M. A. Reasoner.—p. 146.
Disorders of Digestive Tract in Military Practice. C. S. McVicar.—p. 155.
Psychotherapy in Two Hundred Cases of Psychoneurosis. J. H. Huddleson.—p. 161.
Personal Recollections of Some Old Medical Officers. H. C. Yarrow.—p. 171.

Missouri State Medical Association Journal, St. Louis

24: 49-92 (Feb.) 1927

Obstruction of Esophagus: Six Cases. C. A. W. Zimmermann, Cape Girardeau.—p. 49.
Esophageal Obstruction. V. E. Chesky, Halstead, Kan.—p. 55.
Prevention of Puerperal Infection. H. B. Goodrich, Hannibal.—p. 57.
Occipitoposterior Positions in Labor. G. K. Sims, Joplin.—p. 61.
Diabetic Diets. T. S. Fleming, Moberly.—p. 64.
Rôle of Diet in Practice. E. C. Mason, Springfield.—p. 67.
Ambulant Treatment of Hemorrhoids. J. J. Gaines, Excelsior Springs.—p. 68.

New York State Journal of Medicine, New York

27: 159-220 (Feb. 15) 1927

New York State Program in Venereal Disease Control. A. Pfeiffer, Albany, N. Y.—p. 159.
*Rôle of Carbohydrates in Infant Feeding. L. E. La Fetra, New York.—p. 167.
Vitamin Value of Some Common Food Stuffs. W. H. Eddy, New York.—p. 170.
Debt of Religion to Science. H. E. Fosdick, New York.—p. 173.
Employment of Motion Pictures in Medical Education. J. F. Montague, New York.—p. 176.
Fetal and Neonatal Mortality. M. Rosensohn, New York.—p. 177.
Uncomplicated Displacements of Uterus. P. B. Bland, Philadelphia.—p. 181.
Types of Goiter Encountered in Children. J. W. Hinton, New York.—p. 187.

Rôle of Carbohydrates in Infant Feeding.—La Fetra calls attention to the fact that the various carbohydrates have different rates of absorption in the digestive tract, the simple monosaccharids being absorbed more quickly than the complex sugars, dextrins and starches. The different sugars, until absorbed from the intestinal tract, have special tendencies to different types of fermentation. Carbohydrates should be furnished in the diet of infants and children to the amount of about 50 per cent of the total calories.

Northwest Medicine, Seattle

26: 51-124 (Feb.) 1927

Drainage. P. W. Willis, Seattle.—p. 51.
Cholecystitis. E. O. Jones, Seattle.—p. 53.
Duodenal Fistula. N. A. Johanson, Seattle.—p. 56.
*Abdominal Pain of Cardiovascular Origin. R. D. Forbes, Seattle.—p. 58.
*Carcinoma of Appendix. A. O. Loe, Seattle.—p. 60.
Chronic Colitis. C. E. Hayyard, Seattle.—p. 62.
Congenital Valves of Posterior Urethra: Two Cases. A. B. Hepler, Seattle.—p. 69.
Injuries of Lower Urinary Tract. A. H. Peacock, Seattle.—p. 70.
Fibroid Tumors Complicating Pregnancy. G. G. Thompson, Seattle.—p. 72.
*Fibromyoma of Uterus. O. F. Lamson, Seattle.—p. 76.
Carcinoma of Cervical Stump Following Partial Hysterectomy. C. W. Sharples, Seattle.—p. 77.
Vaginal Atresia: Three Cases. J. T. Mason, Seattle.—p. 79.
*Cerebral Tumor. G. W. Swift, Seattle.—p. 83.
Compression Fracture of Spine with Cord Symptoms: Recovery After Laminectomy. W. C. Speidel and A. Fey, Seattle.—p. 86.
Fractured Femur in Child. W. C. Lippincott, Seattle.—p. 87.
Reduction of Fractures: Open Method. D. V. Trueblood, Seattle.—p. 89
Pyretic Treatment of Chronic Arthritis. H. J. Wyckoff, Seattle.—p. 90.
*Coccidioidal Granuloma. W. Kelton, Seattle.—p. 92.
Postural Defects in Children. H. E. Coe, Seattle, Wash.—p. 94.
Thyroid Gland. R. E. Mosiman, Seattle.—p. 97.
Toxic Goiter: Five Hundred Cases. B. T. King, Seattle.—p. 101.
Pathology of Malignant Tumors. R. E. Mosiman, Seattle.—p. 107.

Abdominal Pain of Cardiovascular Origin.—In only one of the five cases reported by Forbes was a postmortem examination obtained, and in only two of them was coronary disease suspected in the first attack. The pain was severe and located in the epigastrium. The character of the pain, however, which was typical, and the subsequent course of events, makes it highly probable that all these patients suffered from coronary disease.

Carcinoma of Appendix.—Loe reports a case of carcinoma in an acutely inflamed appendix, with fatal termination from probable metastasis and general carcinomatosis.

Fibromyoma of Uterus.—The tumor in Lamson's case grew rapidly and into the vagina, displacing the bladder and the ureters. Other unusual features were the enormous elongation and widening of the vaginal canal; absence of hemorrhages, although it was a submucous type of fibroid and absence of bladder symptoms and of intestinal obstruction.

Cerebral Tumor.—Swift reports a case of angioma of the right arachnoid with subcortical hemorrhage which has progressed well under roentgen-ray treatment. Several other cases of cysts and tumors are also reported.

Coccidioidal Granuloma.—Kelton believes that his case of coccidioidal granuloma originated in Alaska. The patient was a Filipino.

Ohio State Medical Journal, Columbus

23: 103-190 (Feb. 1) 1927

Treatment of Chronic Diarrhea. W. Teachnor, Sr., Columbus.—p. 123.
Fracture of Skull. B. N. Carter, Cincinnati.—p. 128.
Barbital Poisoning Simulating Multiple Sclerosis. C. W. Stone, Cleveland.—p. 132.
Infection of Nasal Accessory Sinuses. G. W. Stimson, Warren.—p. 134.
Pyloric Obstruction in Infants. S. D. Giffin, Toledo.—p. 137.
Iodipin in Diagnosis of Nasal Sinus Conditions. H. M. Goodyear, Cincinnati.—p. 143.
Early Diagnosis of Cancer of Stomach. J. Forman, Columbus.—p. 145.

Oklahoma State Medical Association Journal, Muskogee

20: 31-55 (Feb.) 1927

Lowering Infant and Maternity Mortality Rates. L. S. Blachly, Oklahoma City.—p. 31.
Common Errors of Diagnosis in Pediatric Practice. C. M. Pounders, Oklahoma City.—p. 35.
Prenatal Care. E. E. Rice, Shawnee.—p. 37.
Gentlemen in Urology. R. Bolend, Oklahoma City.—p. 40.
Muscle Tucking for Strabismus. W. A. Huber, Tulsa.—p. 41.
Plastics of External Nose. C. von Wedel, Oklahoma City.—p. 44.

Philippine Islands Med. Association Journal, Manila

6: 419-458 (Dec.) 1926

Relation of Public and Semipublic Child Welfare Activities to Private Physicians. T. Tlicaño, Manila.—p. 419.
Weight-Height-Age Tables of Filipino Children. S. Siasoco and E. Goco, Washington, D. C.—p. 425.

Physical Therapeutics, Baltimore

45: 1-60 (Jan.) 1927

Electric Treatment of Obesity. F. Nagelschmidt, Berlin.—p. 1.
Danger of Electric Shock from Electrical Engineering Standpoint. A. E. Kennelly, Cambridge, Mass.—p. 16.
Light and Its Therapeutics. F. H. Humphris, Edinburgh.—p. 23.
Electrosurgical Treatment of Hemorrhoids and Other Rectal Conditions. W. Bierman, New York.—p. 28.

45: 61-116 (Feb.) 1927

Physical Therapy in Mechanical Constipation. J. Gutman, New York.—p. 61.
Dietetic Treatment for Chronic Gallbladder and Duct Disease. A. Bassler, New York.—p. 75.
Treatment of Mucous Colitis. L. H. Levy, New Haven, Conn.—p. 81.
Clinical Physical Therapy of Gastric Conditions: I. Pyloric Syndrome. II: Solar Syndrome. A. J. Riviere, Paris.—p. 87.
Postoperative Electrotherapeutics. J. N. Chausse, Montreal.—p. 98.

Radiology, St. Paul

8: 93-184 (Feb.) 1927

Surgical Treatment of Cancer. W. J. Mayo, Rochester, Minn.—p. 93.
*Angina Pectoris: Treated with Roentgen Ray. L. C. Ecker, Washington, D. C.—p. 98.
*Intratracheal Injection of Iodized Oil in Adults. S. Pritchard, B. Whyte and J. K. M. Gordon, Battle Creek, Mich.—p. 104.
Duodenal Ulcer: Roentgenologic and Histologic Findings. C. G. Sutherland, Rochester, Minn.—p. 111.
*Roentgen-Ray Protective Plasters. F. L. Hunt and M. Temin, Washington, D. C.—p. 117.
Uniform Voltage vs. Pulsating Currents in Clinical Deep Therapy. A. Mutscheller, New York.—p. 121.
Radioactive Substances: Uses and Applications: Application of Radium to Carcinoma of Esophagus. J. Muir, New York.—p. 127.
Tabetic Spinal Osteo-Arthropathy: Four Cases. J. L. Garvey and R. L. Glass, Ann Arbor, Mich.—p. 133.
Roentgen-Ray Therapy in Functional Thyroid Disease. A. W. Erskine, Cedar Rapids, Iowa.—p. 140.
*Relative Sensitivity of Kidney to Irradiation. H. P. Doub, A. Bolliger and F. W. Hartman, Detroit.—p. 142.
Anatomy of Normal Small Intestine as Observed Roentgenographically. R. W. Morse and L. G. Cole, New York.—p. 149.

Roentgenotherapy of Angina Pectoris.—In the case reported by Ecker the roentgen rays were directed to the lower cervical and upper five dorsal vertebrae. The dose was 5 milliamperes with a 9 inch gap at 10 inch distance through 5 millimeters of aluminum for six minutes. This was a suberythema dose. This treatment has been repeated twelve times to date. The intervals of treatment have varied from ten days to four weeks. The patient still has substernal pain after exertion or emotion, but there is not transmission into the arm, and the attacks are promptly relieved by glyceryl trinitrate. The pain is decidedly less severe, much less frequent, and is not accompanied by angor.

Intratracheal Injection of Iodized Oil.—Some of the indications mentioned by Pritchard et al. for the bronchial injection of iodized oil are: Chronic cough associated with long standing infection in the upper respiratory tract, particularly sinusitis; cough with purulent expectoration in the presence of a history of a previous pneumonia or the inspiration of an organic foreign body; long standing cough with little if any expectoration in the absence of frank pulmonary disease; obvious bronchiectasis for the purpose of mapping the diseased area; bronchial fistulas and as a therapeutic agent. The authors have used the oil in 1,000 cases with slight untoward effects in only six cases. A mild iodism occurred in the form of an irritable rash developing about forty-eight hours after the administration of the oil. Contraindications to the use of the oil are: acute conditions such as occur in the early stages of cold and influenza; acute active tuberculosis; very extensive and advanced pulmonary suppurations, particularly when the patient is extremely weak; advanced circulatory complications, such as angina pectoris aneurysm, cardiac decompensation and recent hemoptysis.

Roentgen-Ray Protective Plasters.—From the standpoint of protection, Hunt and Temin obtained the best results with fine lead shot (diameter 1.25 mm.) mixed with lead monoxide and glycerin. With a sample only 2 mm. thick, which gave a distinctly granular mixture, as indicated by the mottled appearance of the photographic plate, the average protective effect was nearly seven-tenths that of metallic lead, and with a sample 5 mm. thick, no detectable amount of radiation reached the photographic plate. The presence of lead monoxide makes the combination a fairly good electrical insulator (resistivity 10^{7} ohm-cm.), which is of advantage in minimizing electrical hazards.

Sensitivity of Kidney to Irradiation.—Doub et al. assert that the kidney is the most susceptible organ considered, as far as anatomic changes and loss of function are concerned. The susceptibility of other organs to chronic changes is as follows in the order named: intestine, stomach, pancreas, ovary, spleen, lung, suprarenal and liver. Direct irradiation of the kidney is shown to produce nephritis, with hypertension in clinical cases as well as in the experimental animal. Such direct irradiation should be avoided, especially in the young individual.

Rhode Island Medical Journal, Providence

10: 17-32 (Feb.) 1927

Treating Fracture of Femur. P. P. Chase and C. O. Cooke, Providence—p. 19.
Low Back Pain. R. Hammond, Providence.—p. 21.
Comparison of Results of Various Treatments for Acute Gonorrhea Epididymitis. E. Stone, Providence.—p. 25.

Tennessee State Med. Association Journal, Nashville

19: 179-205 (Nov.) 1926

Management of Goiter Problem. W. D. Haggard and C. R. Crutchfield, Nashville.—p. 179.
Sterility in Female. L. E. Burch, Nashville.—p. 186.
Etiology of Granuloma Inguinale. J. A. McIntosh, Memphis.—p. 190.
Surgical Drainage of Intestines. H. H. Shoulders, Nashville.—p. 199.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Biochemical Journal, London

20: 1147-1376, 1926

Bacterial Nutrition: III. Phosphates and Growth of Streptococci. H. R. Whitehead.—p. 1147.
Thermal Study of Possible Source of Energy in Anaerobic Metabolism: Properties of Sorbitol. J. G. Davis, W. K. Slater and V. Smith.—p. 1155.
Aerobic and Anaerobic Metabolism of Common Cockroach (Periplaneta Orientalis): I. J. G. Davis and W. K. Slater.—p. 1167.
*Distribution of Reducing Sugar and Mode of Glycolysis in Human Blood. J. H. Dowds.—p. 1173.
*Denaturation of Egg Albumin by Weak Acids in Presence of Salts. H. Mastin and S. B. Schryver.—p. 1177.
Constitution of Sponges: I. Common Bath Sponge, Hippospongia Equina. V. J. Clancey.—p. 1186.
Micromethod for Determination of Hausmann Numbers of Proteins. K. V. Thimann.—p. 1190.
*Brain Metabolism: III. Carbohydrate Metabolism; Relationship of Glycogen and Lactic Acid. E. G. Holmes and B. E. Holmes.—p. 1196.
*Estimation of Phosphorus in Blood. J. H. Gaddum.—p. 1204.
Preparation and Physicochemical Properties of Sericin. K. Kodama.—p. 1208.
Colorimetric Estimation of Minute Amounts of Compounds of Silicon, Phosphorus and Arsenic. W. R. G. Atkins and E. G. Wilson.—p. 1223.
*Physiologic Rôle of Vitamin B.: I. Relation to Tissue Oxidations. J. C. Drummond and G. F. Marrian.—p. 1229.
*Id.: II. Relation Between Vitamin B and Protein in Diet of Growing Rats. V. Reader and J. C. Drummond.—p. 1256.
Interaction of Aminocompounds and Carbohydrates: III. Action of Nitrous Acid on Certain Nitrogenous Sugar Derivatives and Related Compounds. A. Hynd and M. G. Macfarlane.—p. 1264.
*Growth and Reproduction on Synthetic Diets: I. G. A. Hartwell.—p. 1273.
Yeast Extract as Supplement to Gelatin. G. A. Hartwell.—p. 1279.
Distribution of Xanthine Oxidase: I. E. J. Morgan.—p. 1282.
Effects of Various Agents on Color Tests for Vitamin A. S. G. Willimott, T. Moore and F. Wokes.—p. 1292.
*Vitamins and Other Constituents of Grape Fruit Rind. S. G. Willimott and F. Wokes.—p. 1299.
*Influence of Cow's Diet on Fat Soluble Vitamins of Winter Milk. J. Golding, K. M. Soames and S. S. Zilva.—p. 1306.
Degradation of Glucose by Blood Corpuscle of Rabbit: II. J. T. Irving.—p. 1320.
Preparation and Some Properties of Globin of Oxyhemoglobin. R. Hill and H. F. Holden.—p. 1326.
Antirachitic Action of Irradiated Sawdust. O. Rosenheim and T. A. Webster.—p. 1340.
Nature of Fearon's Color Reaction; Nonspecificity for Vitamin A. O. Rosenheim and T. A. Webster.—p. 1342.
Nonprotein Cysteine in Plants: Attempted Isolation of Glutathione from Pea (Pisum Sativum). A. Kozlowski.—p. 1346.
Test for Vitamin D. H. Jephcott and A. L. Bacharach.—p. 1351.
Separation of Fatty Acids. A. H. Lewis.—p. 1356.

Estimating Reducing Sugar in Blood.—Dowds used McLean's method of estimating the amount of reducing sugar in the blood. In human blood, the red corpuscles contain a considerable amount of reducing sugar. In capillary blood there is generally more sugar in the plasma than in the corpuscles, whereas in venous blood the reverse is generally the case, owing to the plasma sugar being more accessible to the tissues. From the results obtained, it is inferred that the glycolysis in human blood is due almost entirely to the activity (chiefly metabolic) of the leukocytes.

Denaturation of Egg Albumin.—Evidence is produced by Mastin and Schryver to show the presence of a new type of linkage in proteins.

Brain Metabolism.—It is suggested by the Holmeses that the brain depends on the blood sugar for lactic acid precursor rather than on any substance which it stores itself.

Estimation of Phosphate in Blood.—According to Gaddum, the "inorganic phosphate" in 0.5 cc. of blood may be estimated by dissolving the precipitate of phosphomolybdate in tenth-normal sodium bicarbonate and titrating the excess sodium bicarbonate with tenth-normal hydrochloric acid by means of a micrometer syringe.

Rôle of Vitamin B.—Observations made by Drummond and Marrian of food consumption indicate that a deficiency of vitamin B causes a progressive failure of appetite, leading eventually to almost complete abstention from food. The results of control experiments on animals deprived of food indicate that the body temperature and oxygen consumption in the final phase of vitamin B deficiency are probably the natural consequence of an exhaustion of reserve food materials. These results are discussed in the light of existing theories regarding the physiologic action of vitamin B, and the conclusion is reached that, in the case of rats at any rate, the nutritive failure following a deficiency of the vitamin is virtually identical with that resulting from starvation.

Relation Between Vitamin B and Diet.—Further confirmation has been obtained by Reader and Drummond that diets consisting largely of protein (caseinogen) may be inadequate for the growth requirements of young rats. This inadequacy may be made good by raising the proportion of yeast extract (vitamin B). The results of these experiments seem to confirm the views of Hartwell and of Tscherkes that vitamin B is related quantitatively to the amount of protein in the diet. They do not lend support to the opinions that the vitamin stands in such relation to the amount of carbohydrate ingested or metabolized or to the total calories consumed, at any rate as far as the effect on growth is concerned. Additional evidence has been obtained of the hypertrophy of the kidneys in animals fed on diets consisting largely of proteins. This hypertrophy is marked only when the composition of the diet is such that the animal does not grow at a normal rate. The excretion of large quantities of nitrogenous end-products of metabolism does not cause injury to the kidneys.

Value of Synthetic Diets.—Descriptions are given by Hartwell of various synthetic diets which produce good but not maximal growth; in one experiment, the growth curve approximates closely but is not quite equal to that obtained from control rats fed on a mixed diet. The dietary requirements of the rat vary considerably at different phases of its existence. Two diets are described which provided for good growth (almost maximal), but not for the birth of young. Another diet which gave less good results for growth was adequate for reproduction.

Vitamins and Glucosides in Grapefruit Rind.—Willimott and Wokes assert that grapefruit rind contains considerable amounts of vitamin B, but virtually no vitamin A. The content of vitamin C has not yet been investigated. Naringin, the specific glucoside of the grapefruit, was found present in the rind and in alcoholic extracts of it. Data are presented on the reaction and content of oxidizing enzymes as compared with the vitamin A content in the three citrus fruits.

Influence of Diet on Vitamins of Cow's Milk.—According to Golding et al., the inclusion of kale in the winter ration of the cow raises the vitamin A content but not the vitamin D content of the milk. The inclusion of cod liver oil in the winter ration of the cow raises the vitamin A and the vitamin D content of the milk. Previous observation that the administration of high doses of cod liver oil to cows reduces the percentage of fat in their milk is confirmed.

British Medical Journal, London

1: 173-220 (Jan. 29) 1927

*Treatment of Hernia. G. Keynes.—p. 173.
Acute Intestinal Obstruction Due to Intra-Abdominal Causes. H. Gray.—p. 179.
Pyelitis from Infection with Morgan's No. 1 Bacillus. D. Riding.—p. 183.
*Extensive Diverticulosis Without Symptoms. N. L. Corkill.—p. 184.
*Ultraviolet Light from Open Arc with Titanium Electrodes. A. Roberts.—p. 184.
*Advanced Tetanus Cured by Intrathecal Injection of Antitoxin. B. Muir.—p. 186.
*Carcinoma of Thymus Gland. J. Reid.—p. 187.
*Large Vesico-Urethrovaginal Calculus. M. Sourasky.—p. 187.
*Alternative to Circumcision in Phimosis. D. W. Whitfield.—p. 187.

Treatment of Hernia.—Keynes extols the Gallie operation for hernia, done under local anesthesia, and describes a method of operating for femoral hernia which has been effective in 125 cases. The principle involved is an extension of the plastic operation done for the treatment of direct inguinal hernia. When the sac has been removed, a rather large semicircular flap is cut from the aponeurosis of the internal oblique layer of the rectus sheath, and this is turned over through almost 270 degrees, so that its lower edge can be sutured to the ligament of Astley Cooper or even to the periosteum of the pubic bone from behind Gimbernat's ligament to the femoral vessels. This strong aponeurotic curtain is not under tension, and remains as a permanent and efficient

bar against recurrence of the hernia. Nor is any deficiency left in the floor of the inguinal canal.

Extensive Diverticulosis Without Symptoms. — Corkill reports a case in which from the cecum to the beginning of the rectum were hundreds of diverticula containing beads of feces, and varying in size from that of a pea to that of a cherry. These diverticula had been present for at least fourteen years without giving rise to any symptoms. Another interesting condition present was an arrested rotation of the small intestine. The duodenum, with the superior mesenteric artery on its inner side, turned back on the head of the pancreas in the shape of a double S. The duodenojejunal flexure was at McBurney's point, the mesentery running thence upward to the left. The mesenterized cecum, which was entered by the ileum from the right, was slightly left of the midline in the upper umbilical region. This arrest had apparently occurred at the eleventh week, after the cecum had entered the abdomen through the narrowing umbilical orifice.

Ultraviolet Rays from Titanium Electrodes.—Roberts has studied the effects of radiations from different sources on the body, particularly in different disease conditions. In his experience the most potent rays are from metallic arcs in which titanium is the prevailing element. Titanium rays are rich in lines in the extreme ultraviolet, which means considerable effect with short exposures. Three minutes' exposure of the naked body may bring a tingle to the spine, and with repetition produces pigmentation. In the majority of cases, two or more baths produce marked results. Patients who are mentally disturbed are benefited, and many forms of anemia react to this ray treatment. Examination of the blood before, during and after treatment has demonstrated in some cases a rapid return to a normal condition and to a permanent improvement. For the purpose of treatment, a suitable apparatus has been designed to operate from one to twelve arcs, and applicable in either the standing or the recumbent position. A comparison of the spectrums from the titanium arc with those from iron and carbon arcs makes it clear that the radiations from the titanium arc are very rich in rays of shorter wave length.

Recovery from Advanced Tetanus.—The case reported by Muir illustrates the value of treating the various pathologic phenomena of established tetanus by the intrathecal administration of powerful doses of antitoxin, by supporting the patient's heart and general system during the muscular spasms, and by removing promptly the site of infection. The case seemed to be a hopeless one, as the tetanus was already well developed. In the course of four days, 62,000 units of standard tetanus antitoxin was injected intraspinally and subcutaneously. Muir considers that intrathecal injection at the anatomic site of the anterior horn cells of the spinal cord supplying the injured muscles which are the actual seat of toxin manufacture in the wound is all-important for its success. In this case, the lumbar enlargement of the cord was fully impregnated with the antitoxin, and this appeared to be the successful factor in the case.

Relation of Thymus and Cancer.—Reid suggests that humanity may become susceptible to cancer when the thymus gland does not completely atrophy but takes on an altered function, producing a blood plasma saturated with thymic juice, and thus rendering the body susceptible to cancer organisms (?). He believes that any local source of irritation which lowers the organ's resistance allows cancer to originate and settle in that locality.

Large Vesico-Urethrovaginal Calculus. — The stone in Sourasky's case weighed 4¼ ounces (120 Gm.), and measured 4½ by 4 inches (11.4 by 10 cm.); its nucleus, according to roentgen-ray appearances, consisted of oxalate.

Alternative to Circumcision in Phimosis.—As an alternative to circumcision in phimosis, Whitfield uses an ordinary silver probe. The probe is insinuated between the glans and the foreskin, and is coaxed back until the blunt point is seen or felt to have gone as far as the base of the glans. The probe is then gently worked laterally, first to one side and then to the other, so as to break down the adhesions between the mucous membrane of the glans and the prepuce. Success usually results.

Medical Journal of South Africa, Johannesburg

22: 29-72 (Sept.) 1926

Responsibility for Crime. C. E. Nixon.—p. 31.
Treatment of Hemoptysis. S. F. Silberbauer.—p. 35.
Carious Teeth of Native Children. C. L. Leipoldt.—p. 39.
Leysin as Health Resort. S. F. Silberbauer.—p. 43.
*Use of Soured Milk in Infant Feeding. E. P. Baumann.—p. 44.

22: 137-168 (Dec.) 1926

Sequelae of Lethargic Encephalitis. M. J. Cohen.—p. 139.
Great Omentum. C. V. Anderson.—p. 144.
Cryptopyrexia in Children. C. L. Leipoldt.—p. 147.
Aneurysm: Surgical Aspects. C. F. Beyers.—p. 151.
Id.: Pathologic Aspect. A. S. Strachan.—p. 156.
Feeding of Babies. W. M. Borcherds.—p. 157.

Soured Milk in Infant Feeding.—As the result of clinical experience extending over nearly a thousand cases, Baumann confirms the favorable results reported by others from the use of soured milk as a therapeutic diet in infancy. Lactic acid milk, by virtue of its cheapness, ease and rapidity of preparation, appears to be the artificial food of choice in all conditions of departures from health in early life. It is simple enough for employment in the home. Ill effects have not been observed from its use and contraindications are not known. Nevertheless, lactic acid milk is not to be regarded as capable of replacing human milk in infant dietetics. Although possessing important properties which render it an excellent substitute when breast milk is not available, it must always remain a makeshift. Although practically as digestible as that food, it does not possess its biologic qualities, and can never adequately replace mother's milk.

National Medical Journal of China, Shanghai

12: 413-509 (Dec.) 1926

*Cholera Epidemic of 1926 in Shanghai. Wu Lien-Teh, J. W. H. Chun and R. Pollitzer.—p. 413.
*Value of Urochromogen Test. Y. Y. Ying.—p. 453.
*Influence of Various Albumins on Partition of Some Nitrogenous Compounds of Nurslings. P. S. Chang.—p. 460.
Treatment of Cholera. K. W. J. Lieo.—p. 473.

Cholera in Shanghai.—Wu Lien-Teh and his associates report on the outbreak of cholera that occurred in the Shanghai district. Altogether, not less than 20,000 cases occurred. Siam reported 5,000 deaths alone. With the acceptance by Chinese authorities of modern methods of control of cholera, the incidence and mortality of the disease are notably diminished. For instance, there was a great difference in the mortality observed in the hospital with which the authors are connected (17.3 per cent) and of the Municipal Hospital (54.5 per cent), while the Railway Hospital takes an intermediate position with 34.5 per cent. A similar discrepancy between the authors' records and those of the Russian hospitals was evident also in the epidemic of 1919 (57.77 per cent and 14.11 per cent). This appeared fully accounted for by the differences of treatment used, the favorable results being due to the use of hypertonic intravenous salt infusions, whereas the Russian physicians at first adhered to the subcutaneous administration of physiologic sodium chloride solution.

Value of Urochromogen Tests.—Ying has employed the urochromogen test 1,772 times in 1,349 cases of different diseases, and in 423 normal persons. The test was positive in 71.4 per cent of typhoid, 23.43 per cent of malaria, and 25.64 per cent of those cases in which tubercle bacilli were demonstrable in the sputum, but in only 2.8 per cent of those in which organisms were not found. It was negative in thirty-eight cases of surgical tuberculosis. Of twenty-two cases of fistula in ano, and five cases of otitis media, a positive reaction was noted in one of each which might possibly be tuberculous in origin. Positive reactions also occurred in other febrile diseases such as typhus, scarlet fever and pneumonia. Various drugs administered orally, subcutaneously or intravenously prior to the performance of the test did not in any way influence the specificity of the test. It was uniformly negative in normal persons.

Nitrogen Excretion of Infants.—Chang's observations indicate that, as contrasted with adults, infants excrete comparatively less urea but comparatively high quantities of ammonia, uric acid and residual nitrogen.

Bulletin de l'Académie de Médecine, Paris

97: 113-128 (Jan. 25) 1927

*Use of B. C. G. Vaccine Subcutaneously. B. Weill-Hallé and Turpin. —p. 126.

97: 129-164 (Feb. 1) 1927

Testing Activity of Insulin and System of Dosage. A. Desgrez et al. —p. 133.
Necessity of Controlling Preparation of Vaccines. G. Petit et al.—p. 139.
Habit and Disease. C. Fiessinger.—p. 147.
Insulin and Alkaline Mineral Waters in Treatment of Diabetes. R. Durand-Fardel et al.—p. 150.

Prevention of Tuberculosis in Infants by Subcutaneous Injection of B. C. G. Vaccine.—Ten infants belonging to tuberculous parents were injected subcutaneously with B. C. G. vaccine. Because the babies were not immunized during the first days after birth, it was feared that ingestion of the vaccine would not be effectual. From ten to forty millions of tubercle bacilli were used in each case. The injection did not affect the general condition. The local phenomena consisted in the appearance of a node in the third week, which developed into an abscess two weeks later. Suppuration continued for about three months. Then it ceased, and a scar formed. The skin reaction became positive within two or three months. One infant died, supposedly from meningitis. All the others grew normally, although they remained in a tuberculous environment.

Bulletins de la Société Médicale des Hôpitaux, Paris

51: 1-35 (Jan. 20) 1927

Value of "Synthalin" in Diabetes. L. Blum and P. Carlier.—p. 5.
Case of Primary Cancer of the Lung. A. Pissavy et al.—p. 7.
*Forms of Pulmonary Arteritis in Syphilitic Patients. C. Laubry and M. Thomas.—p. 9.
Oxycephalia with Luxation of the Eye. J. Comby.—p. 26.
*Generalized Purpura of Gonorrheal Origin. P. Chevallier et al.—p. 30.

Anatomic and Clinical Features of Lesions of the Pulmonary Artery in Syphilitic Patients.—Laubry and Thomas distinguish a primary pulmonary arteritis in which the syphilitic lesions are located exclusively in the pulmonary artery, while other organs, including the lungs, are uninvolved. The primary type presents three forms: the typical, with a definite clinical syndrome, the thrombotic and the aneurysmal forms. They describe a secondary pulmonary arteritis associated with syphilis of the bronchi or of the aorta. The third type is represented by sclerosis of the artery occurring in syphilitic patients. Here the rôle of syphilis is possible, but not unquestionable. The paper contains twelve case histories.

Generalized Purpura of Gonorrheal Origin.—Chevallier, Lévy-Bruhl, George and Bourgeois' patient was a woman, aged 36. Within six months, the purpuric eruption had spread all over the body and was present in the mouth. The fact that the purpura was preceded by gonorrheal metritis suggested a search for the gonococcus. This micro-organism was found in the uterine discharge, in the purpuric lesions and in cultures of the blood. The fixation reaction also was positive. The authors emphasize the point that the chronic purpura occasioned by gonorrheal septicemia ran its course without appreciable fever. The patient died from hemorrhages (intercurrent abortion) and anemic cachexia.

Gynécologie et Obstétrique, Paris

14: 289-368 (Nov.) 1926

*Partial Symphyseotomy and Frank's Symphyseotomy. E. Zarate.—p. 289.
Theories of Pathogenesis of Adenomyomatosis. L. Michon and H. Comte.—p. 298.
Perithelioma of the Ovary. A. Babès and D. Rapile.—p. 319.
Statistics of Posterior Occipito-Iliac Positions. Mercken.—p. 343.
Natural Delivery in a Case of Contracted Pelvis. P. Lantuéjoul.—p. 353.

Partial Symphyseotomy and Frank's Symphyseotomy.—Zarate describes his technic for symphyseotomy in cases of contracted pelvis with an obstetric conjugate of not less than 8 cm. The skin is pierced close to the upper margin of the pubic joint, and a bistoury is introduced perpendicularly. The pubic fibrocartilage and a part of the arcuate ligament are severed. During the operation the woman's legs are kept flexed and in forced abduction, which greatly favors separation of the pubic bones. By this method the pubic inlet may be enlarged by as much as 5 cm. The delivery is usually accomplished in half an hour. Zarate believes that partial symphyseotomy eliminates completely high forceps extraction in moderately contracted pelves. The operation is simple and safe; injury to the nearby organs can hardly occur. He emphasizes the fact that the operative technic is radically different from that in Frank's symphyseotomy.

Paris, Medical

63: 101-116 (Jan. 29) 1927

The Purpose of Clinics. C. Achard.—p. 101.
*Gastric Phenomena and Vertebral Lesions. J. Zahradnicek.—p. 107.
Gastric and Duodenal Ulcers in Natives of Tunis. Brun and Ronchot. —p. 109.
Hemostatic Thoracoplasty. C. Colbert and J. Chatard.—p. 113.
Partial Consolidation of Fractured Carpal Scaphoid. L. Ménard.—p. 115.

Gastric Phenomena Connected with Vertebral Lesions.—Zahradnicek describes four of his twenty-six cases in which gastrointestinal disturbances were connected with lesions of the vertebral column. Some of the patients presented stubborn diarrhea, others gastric atonia, pain in the stomach and vomiting. In none of the patients did roentgen-ray examinations or chemical tests reveal any changes in the stomach. On the other hand, there were always lesions in some of the vertebrae. Tuberculous spondylitis was the most frequent. This causes chemical and mechanical changes in the blood circulation which reflects on the ganglion cells of the sympathetic. Irritation of these cells increases the inhibiting action of the sympathetic on gastric motility. Atony and reduction of gastric secretion result. On the other hand, the spinal lesion may occasion paralysis and suppression of the inhibiting action of the sympathetic on gastric motility. This enhances the activity of the parasympathetic, resulting in exaggerated intestinal peristalsis and diarrhea. The gastric phenomena disappeared as soon as the lesion of the spine had been improved.

Presse Médicale, Paris

35: 161-176 (Feb. 5) 1927

*Etiology of Postvaccinal Encephalitis. C. Levaditi et al.—p. 161.
"Subserous" Appendectomy. F. M. Cadenat.—p. 165.
Classification of Vitamins. J. Lorenzini.—p. 166.

Etiology of Postvaccinal Encephalitis.—Levaditi, Nicolau and Bayarri know of over 100 cases of encephalomyelitis in Europe, which were ascribed to injections of vaccine virus. Their experiments were conducted on rabbits, later on monkeys. They conclude that postvaccinal encephalitis is not caused by the vaccine virus. Localization of the virus in the cerebral tissue inhibits the defensive power of the latter. This may unleash an encephalitis of the epidemic type in carriers or in persons who already have a latent phase of the disease. Another proof that vaccine virus is not responsible for encephalitis is provided by vaccination with neurovaccine, employed on a large scale in Spain. In Barcelona Gonzalés performed 12,600 vaccinations with an emulsion of smallpox virus cultivated in vivo in rabbits' brains. The results were analogous to those obtained with ordinary vaccine virus. In a children's institution neurovaccine was used in 20,365 vaccinations. In infants under 4 weeks the results were positive in over 91 per cent; the percentage of positive revaccinations (after an interval of about seven years) was 58.6 per cent. During the last four years the total number of neurovaccinations made in Spain was two and a half millions. Complications were rare and slight. Postvaccinal encephalitis was not seen. The neurovaccine is easily prepared and does not contain associated micro-organisms.

Schweizerische medizinische Wochenschrift, Basel

57: 25-52 (Jan. 8) 1927

This issue contains the proceedings of the Tenth Congress of Swiss Dermatologists.

57: 53-72 (Jan. 15) 1927

Malformations of the Extremities. P. F. Nigst.—p. 53. C'td.
Retroperitoneal Cyst Originating in Wolff's Duct. E. Forster.—p. 61.
Foreign Body in the Urethra. J. Weber.—p. 65.
*The "Pacifier" and Tuberculosis. J. Weber.—p. 65.

57: 73-96 (Jan. 22) 1927

French Pathologists up to 1819. J. Karcher.—p. 73.
Malformations of Extremities. P. F. Nigst.—p. 81. C'tn.
Reduction of Subcoracoid Dislocation. E. Ceppi.—p. 91.

The "Pacifier" and Tuberculosis.—Weber observed two cases of transmission of tuberculosis to infants by "pacifiers." The grandmother in one of the cases and a friendly neighbor in the other—both of them tuberculous—followed the general custom, when the baby dropped the "pacified," of putting it in their own mouths before giving it back to the infant. He regards the use of "pacifiers" as the surest method of transmission of colds, tonsillitis or tuberculosis to infants.

Pediatria, Naples

35: 57-112 (Jan. 15) 1927

*Roentgenothermotherapy of Poliomyelitis. E. Castronovo.—p. 57.
*Vaccine Treatment and Prevention of Whooping Cough. O. Pellegrini. —p. 71.
Adenoids in Infants. I. Balzano.—p. 87.
Ultraviolet Rays in Treatment of Children. A. Berardi.—p. 98.

Roentgenothermotherapy of Poliomyelitis.—Castronovo believes that diathermy is always useful in children with acute anterior poliomyelitis, but that it is necessary only in those with abnormally low temperatures. Roentgenotherapy aids in children where the paralysis is conditioned by an edema of the spinal cord. Galvanotherapy is always useful and may be supplemented by massage and hydrotherapy.

Vaccine Treatment and Prevention of Whooping Cough.—Pellegrini had fair results in treatment of whooping cough with comparatively large doses of the vaccine. The preventive injection gave still better results (complete protection in 90 per cent of the children).

Policlinico, Rome

34: 127-162 (Jan. 24) 1927

Pulmonary Gangrene. G. Lega.—p. 127.
Parodi's Ergomanometer. U. Carpi.—p. 137.

34: 1-48 (Jan. 1) 1927. Medical Section

*The Blood After Paracentesis in Cirrhosis. G. Avezzù.—p. 1.
Metabolism of Cholesterol. S. Marino.—p. 16.
Intrahepatic Calculosis. C. A. Lang.—p. 24.
The Phenoltetrachlorphthalein Test of Liver Function. P. M. Re. —p. 37.

34: 1-52 (Jan. 15) 1927. Surgical Section

Cephalic Tetanus. G. Bettazzi.—p. 1.
Retroperitoneal Echinococcus Cyst. M. Fanucci.—p. 11.
Bleeding Time in Hepatic Diseases. A. Merlini.—p. 26.
Radiotherapy of Cancer of the Tongue. G. Zanotti.—p. 34.

Blood after Paracentesis in Cirrhosis.—Avezzù determined the protein content of the serum and the number of blood corpuscles in cirrhotic patients before and after removal of ascites. A moderate inspissation of the blood follows. The low refractometric index of the serum before the paracentesis is due to hydremia, not to a "serous anemia" (deficiency of serum proteins). No matter how frequently the ascites is removed, the serous anemia does not develop, because the protein content of the transudate diminishes gradually and is easily compensated for by the protein intake in food.

Riforma Medica, Naples

43: 49-72 (Jan. 17) 1927

Antonio Cardarelli. E. Maragliano et al.—p. 49, 50 and 52.
*Indicanemia in Lobar Pneumonia. A. Vignolo Palombella.—p. 54.
Pathogenesis of Serum Sickness. U. Genazzani.—p. 55.
Sulphur Treatment of Malignant Tumors. O. Cignozzi.—p. 58.
Purulent Otitis Improved by Pneumonia. M. Galli and E. Di Lauro. —p. 67.
"Hyperglycemia and Carbon Dioxide Elimination." P. E. Livierato. —p. 70.

Indicanemia in Lobar Pneumonia.—Vignolo-Palombella found an increased amount of indican in the blood in pneumonia. Its level returns to the normal rapidly after a crisis, slowly in lysis.

43: 73-96 (Jan. 24) 1927

Biotypologic and Orthogenetic Institute in Genoa. Editorial.—p. 73.
Bronchography. P. Ottonello.—p. 76.
*Skin Tests in Typhoid. B. Travaglini.—p. 77.
Giant Toe. V. Aloi.—p. 79.
Formaldehyde Reaction. E. Pittarelli.—p. 80.
Congress of Italian Venerologists and Syphilologists. M. Artom et al. —p. 85.
Cerebral Manifestations After Smallpox Vaccination. M. Gioseffi.—p. 91.

Skin Tests in Typhoid.—Travaglini injected intracutaneously 50 millions of killed typhoid bacilli in 0.1 cc. of physiologic solution of sodium chloride. There was no reaction to the injection during typhoid. Convalescents and other subjects reacted with an erythema. He believes that the negative reaction is specific for typhoid. The phenomenon does not seem to be identical with the Schick or tuberculin types of reaction.

Rivista di Clinica Pediatrica, Florence

25: 1-72 (Jan.) 1927

Normal Growth of Infants. A. Maccioni.—p. 1.
*Tuberculin Reaction in Arthritis and Erythema Nodosum. L. Magni. —p. 27.

Tuberculin Reaction in Arthritis and Erythema Nodosum.—Magni found a relative anergy to tuberculin in children suffering from chronic and subchronic arthritis. The reaction became positive in those in whom erythema nodosum occurred.

Anales de la Facultad de Medicina, Montevideo

11: 495-588 (Aug.) 1926

*Lymphocytosis in Intestinal Parasitic Infestations. Varela Fuentes and Apolo.—p. 495.
Primary Myopathy in a Child with Syphilis. A. Carrau and J. C. Etcheverry.—p. 511.
*Trachoma in Uruguay 1894-1925. W. Meerhoff.—p. 521.
Vitiligo—Sympathetic Metamerism. C. Stajano and H. Martirena.—p. 563.

Lymphocytosis in Intestinal Parasitic Infestation.—In fifty-three out of eighty-two cases of intestinal parasitic infestation, Varela and Apolo discovered a lymphocytosis reaching at least 30 per cent above the normal. The highest average belonged to the *Entameba histolytica* cases. Neutrophils, mast cells and monocytes were about normal. In twenty-two cases an eosinophilia of 4 per cent or more was found. Protozoa seem to act especially on the lymphoid system.

Trachoma in Uruguay.—Out of 61,234 patients treated at the Montevideo eye clinics from 1894 to 1925, 3,955 had trachoma. The annual percentage has decreased from 18.20 to 2.12 in the same period. The ratio of trachoma patients to the general population has decreased from 1.83 to 0.60 per 10,000. About 56.45 of the patients are under 30 and 21.24 under 15 years of age. About 62.02 per cent are males.

Brasil-Medico, Rio de Janeiro

1: 87-110 (Jan. 29) 1927

*Cosmic Sensitiveness. A. Dias.—p. 87.
Fatal Gastric Hemorrhage with Possibility of Unusual Origin. R. Da Silva.—p. 97.

Cosmic Sensitiveness.—Many different names, including neurosis, meteoropathy, cyclonosis and cosmic sensitiveness, have been suggested for the conditions originated in susceptible patients by changes in the weather. Dias observed the phenomenon in a number of patients. It develops when the external stimulation becomes excessive or the organic adaptation is imperfect. Suprarenal insufficiency may be a predisposing cause, as it lowers the tolerance threshold and produces a relative vagotonia. Cardiac asthenia may also have an effect in inducing such conditions.

Repertorio de Medicina y Cirugía, Bogota

17: 3-60 (Oct.) 1926

Sanitary Organization of Colombia. P. García Medina.—p. 6.
*Eosinophilia in Scarlet Fever. C. Trujillo Gutiérrez and N. García.—p. 19.

Eosinophilia in the Diagnosis and Prognosis of Scarlet Fever.—Trujillo and García determined the white cell count in seventy-four cases of scarlet fever. Out of the total number, forty-four were discarded, as the patients had intestinal parasites also. In the remaining thirty a parallelism was evident between the eosinophilia and the clinical course. In twenty cases, the eosinophilia fluctuated between 6 and 12

per cent, appeared early and persisted until recovery. A moderate eosinophilia is a useful diagnostic sign in scarlet fever, specially if the symptomatology is atypical. Its disappearance or marked fall points to a fatal outcome, as occurred in five cases.

Revista Médica de Barcelona

6: 505-599 (Dec.) 1926

*Radium in Treatment of Skin Cancer. S. Noguer Moré.—p. 50.
Pseudohemoptysis. J. Aris.—p. 523.
*Sodium Thiosulphate in the Treatment of Pulmonary Tuberculosis. C. Xalabarder.—p. 527.

Radium in the Treatment of Cancer of the Skin.—From more than 500 cases of cutaneous and mucocutaneous cancer, Noguer concludes that in order to judge the malignancy of an epithelioma and decide on treatment, one must study not only the histologic structure, but the gross aspect, course and development. In other words, diagnosis must be clinical. Epidermoid (spindle cell) cancer proved the most amenable to radium. The most refractory epitheliomas are those rich in vessels and located in the cheek. Treatment fails in orbital cases, if the eyeball is previously enucleated. Most cutaneous and mucocutaneous epitheliomas yield to radium, if the proper technic is used. A dose unable to destroy the epidermis will not cure.

Sodium Thiosulphate in the Treatment of Pulmonary Tuberculosis.—Xalabarder has treated seventy cases of tuberculosis of the lung with sodium thiosulphate exclusively. In twenty-five the treatment has been continued long enough to justify a report. The result was good in 76 per cent. In the other six patients the drug proved useless, though it did no harm. The initial dose should always be small (from 0.05 to 0.10 Gm.). It is increased until it finally reaches 1 Gm.; the total dose is from 10 to 12 Gm. The reactions and other phenomena are very similar to those caused by "Sanocrysin."

Archiv für Kinderheilkunde, Stuttgart

79: 241-320 (Dec. 3) 1926

*Action of Ultraviolet Rays on Oils. H. Koeppe.—p. 241.
An Unusual Case of Infantilism. J. S. Galant.—p. 247.
*Prevention of Rachitis in Premature Infants. A. Aurnhammer.—p. 253.
Function of the Glottis and Bronchial Respiratory Sounds. A. Winkler.—p. 261.
Treatment of Rachitis. O. Ulmer.—p. 275.
Cardiospasm with Ulcer of the Esophagus in Infants. E. Burghard.—p. 292.

Effect of Ultraviolet Rays on Oils.—Ultraviolet rays produced a specific effect only in the presence of air (oxygen) in Koeppe's irradiation experiments on animal and vegetable oils. This effect, i. e., a stimulating influence on oxidation, seemed to depend on catalytic substances. Paraffin oil, which does not contain organic catalyzers, was not affected by the rays.

Prevention of Rachitis in Prematurely Born Babies.—Aurnhammer administered jecorized buttermilk, i. e., buttermilk irradiated with ultraviolet rays, to rachitic and prematurely born infants. Of eleven premature babies only one presented rachitic symptoms, which, moreover, disappeared after twenty-two days. Seventeen rachitic children treated with irradiated buttermilk were completely cured in an average of thirty-six days. The irradiation prevents destruction of vitamin C in the buttermilk and simultaneously enhances the effect of vitamin B.

Biochemische Zeitschrift, Berlin

179: 3-262 (Dec. 4) 1926

A Sex Hormone in the Human Placenta. E. Glimm and F. Wadehn.—p. 3.
Radium Emanation and Mineral Metabolism in Rabbits. E. Stransky.—p. 19.
Biochemistry of Nerve Centers. H. Gorodissky.—p. 46.
A New Colorimetric Sugar Determination. L. Fábian.—p. 59.
Formation of Antitrypsins. A. Niskowski.—p. 62.
Decomposition of Blood Sugar and Blood Coagulation. B. Stuber and K. Lang.—p. 70.
Ferment Metabolism of Bacteria. H. W. Nicolai.—p. 86.
*Gas and Nitrogen Metabolism in Experimental Scurvy. N. Jarussowa.—p. 104.
Gas Exchange in Pigeons. O. Moltschanowa.—p. 112.
*Ammonia Metabolism in Normal Extremities and Extremities Poisoned by Hydrocyanic Acid. A. Bornstein and K. Keitel.—p. 117.
*Investigations on Insulin in Vitro. E. Glaser and G. Halpern.—p. 144.
Photo-Oxidation by Means of Fluorescent Dyes. H. Gaffron.—p. 157.
Decomposition of Protein Before Death in Thyroidectomized Dogs. G. A. Lánczos.—p. 186.
Decomposition Products of Endocrine Organs. H. Rinck.—p. 194.
The Löwe-Zeiss Interfereometer in Blood Examinations. J. W. Amschler.—p. 199.
Action of Unsaturated Fatty Acids on Blood Sugar. S. Lee.—p. 210.
Blood Coagulation in Diseases of Childhood. J. Csapó.—p. 215.
Liquid Paraffin in Biologic and Colloid Chemical Investigations. H. Bohn.—p. 220.
Phytochemical Reduction of Quinone. H. Lüers and J. Mengele.—p. 238.
Mastic Precipitation of Proteolytic Bacterial Enzymes from Liquid Bacterial Cultures. M. Schierge.—p. 248.
The Blood Sugar in Capillary and Venous Blood in Health, Hypertonia and Syphilis. M. Dörle and W. Frank.—p. 252.
Desaggregating Enzymes. C. Oppenheimer.—p. 261.

Gas and Nitrogen Metabolism in Experimental Scurvy.—In guinea-pigs that had been fed with oats alone, Jarusssowa noted a marked decrease in oxygen consumption and in excretion of carbon dioxide; the nitrogen balance became negative. Feeding the animals large amounts of cabbage restored the oxygen metabolism and was followed by marked improvement in the utilization of the nitrogen in the food.

Ammonia Metabolism in Surviving Extremities.—Bornstein and Keitel perfused surviving hind legs of dogs with defibrinated blood from the abdominal aorta. The ammonia content of the blood decreased by from 10 to 50 per cent of the original value during the perfusion, which lasted from one to two hours. In similar experiments with extremities poisoned with sodium cyanide the blood ammonia remained constant. It is evident that disappearance of ammonia depends on chemical processes which are inhibited by hydrocyanic acid.

Investigations on Insulin in Vitro.—Glaser and Halpern kept insulin and dextrose in a phosphate buffer solution at 18 C. They noted that iron and nickel salts had a catalytic influence on insulin in vitro. The fermentability of dextrose decreased, although its reductibility remained the same. Decrease in fermentability facilitates decomposition of sugar by the organism, which is shown by the fact that in the diabetic metabolism the nonfermentative anhydro type of carbohydrate is decomposed more easily than dextrose. The effect of insulin in vitro was not specific. Active and inactive insulin and proteins produced the same phenomena, depending on the amount of proteins present. The smallest protein molecules had the most marked effect. Crystalloid decomposition products of protein (amino acids) did not have any influence on the fermentability of dextrose.

Dermatologische Wochenschrift, Leipzig

83: 1627-1666 (Nov. 6) 1926

Fox-Fordyce's Disease. A. Lenz.—p. 1627.
*Metastatic Gonorrhea of the Eye. Breiger.—p. 1632.
Biology of Spirochaeta Pallida. W. Leipold.—p. 1643.

Metastatic Gonorrheal Infections of the Eye.—Metastatic gonorrhea plays a considerable part in the etiology of iridocylitis. Breiger describes briefly nine cases. A characteristic feature (seen occasionally also in rheumatic iritis) is a gelatinous exudate in the anterior chamber. There is a danger to sight in the tendency to adhesion of the iris to the anterior surface of the lens from fibrinous masses exuded into the anterior and posterior chambers, since with repeated recurrences the pupil may become occluded and a secondary glaucoma develop. A further danger lies in the possible organization of the slowly absorbed fibrin into a pupillary membrane. The tendency to recurrence is marked. In one case there had been repeated attacks of iritis over a period of seventeen years, in another five attacks in ten years. The primary infection may precede the first eye symptoms by many years (seventeen and sixteeen in two of these cases). Only twice was the disease bilateral. Chronic, it may be strictly circumscribed, disease of the posterior urethra and, especially, of the prostate is the most liable to lead to iritis. Parenteral milk therapy is the best treatment, 5 cc. injected into the buttocks, the treatment to be repeated with 7.5 or 10 cc. after an interval of one day, if the result is not entirely satisfactory. A third injection is rarely needed. Atropin and symptomatic local treatment should

also be used. Conjunctivitis from metastatic gonorrhea is rarer. Three cases are reported. In contrast to iridocyclitis, it may occur in the acute stage of the infection. Clinically it does not differ from other forms of conjunctivitis, except for involvement of the subconjunctival tissue, but this is inconstant. The course is mild and complications do not develop. The only treatment needed is that of the urethritis. The significance of the condition lies in the proof that it brings that the gonococci have entered the blood stream.

Deutsche medizinische Wochenschrift, Berlin

53: 49-92 (Jan. 7) 1927

*Alcohol and Local Option. J. Jastrow.—p. 49.
*Spirochetes Resistant to Arsphenamine. E. Hoffmann and G. Armuzzi. —p. 51.
*Regression of Malignant Tumors. L. Casper.—p. 53.
Pathogenesis of Lobar Pneumonia. A. Lauche.—p. 55.
Tuberculous Reinfection. F. Ickert.—p. 57.
Acquired Hemolytic Anemia. W. Ewig.—p. 58.
Problem of Sepsis. H. Levisohn.—p. 60.
Treatment of Tetany. S. Jislin.—p. 62.
Psychiatric Matrimonial Advice. A. H. Hübner.—p. 63.
*Sympathectomy in Leprosy. Y. Osawa and T. Nojima.—p. 65.
Infectious Diseases. H. Deicher.—p. 73. C'cn.
Campaign Against Quackery. Ebermayer.—p. 74. C'cn.

Alcohol and Local Option.—The editor of the *Deutsche medizinische Wochenschrift* asked Jastrow, professor of political sciences at the University of Berlin, to discuss the nonmedical aspects of alcohol legislation. The author declares it impossible to solve the problem whether complete eradication of alcoholic beverages would be an economic asset or a disadvantage. The wets, who center their argument on the economic loss from bankruptcy of the alcohol industries, are only trying to distract attention from the main points, just as are the drys, who point out that private interests are not identical with public assets. It is a matter of opinion, not of science, whether the teaching of Epicurus or of Diogenes is to be preferred; in other words, whether it is better to have many pleasures or few needs. This economic aspect is irrelevant, if the hygienic and moral drawbacks of alcohol are as great as claimed, provided that prohibition would be able to abolish them and that there are not less drastic means which would accomplish the same result. In discussing these three questions, answers to which he considers essential for deciding for or against prohibition, he disregards the reports from the United States, since he finds that these contradict each other. In the Scandinavian countries, however, smuggling and illicit distilling proved stronger than the law. This touches a point on which physicians may expect to obtain fuller information from a teacher of political sciences: The problem of the limits of the state's power was investigated theoretically by Humboldt and elucidated practically by Bismarck's two failures (the "Kulturkampf" against Catholics and the law against Socialists), although he was the strongest statesman of Europe and had the best governmental machine. Prohibition of an evil is not identical with its abolition. The German Socialists have begun to work for local option under the attractive title of municipal self-government. They expect the women to vote for local prohibition, so that a small fraction of men would be sufficient to pass the measure. Jastrow concludes that this would necessitate the introduction of separate voting for men and women, since a repeal of the enfranchisement of women is undesirable. As to the third condition for the desirability of a prohibition law, namely, the impossibility of bringing about temperance in any other way, he believes that the prohibitionists underestimate the power of education and of improvement in living conditions, just as much as they overestimate the power of the state.

Spirochetes Resistant to Arsphenamine.—Hoffmann and Armuzzi inoculated rabbits with material from a patient with syphilis resistant to arsphenamine. The animals responded promptly to arsphenamine. The resistance to arsphenamine was apparently due to a peculiarity in the reaction of the patient. A change in the brands used and the administration of large doses finally checked the disease.

Regression of Malignant Tumors.—Casper reports recovery from a sarcoma originating in the symphysis pubis and infiltrating the bladder and from a carcinoma of the bladder. Although the tumors were only partly removed, the patients recovered. Radium treatment was used in one of them, but the author does not believe that the recovery was due to it.

Sympathectomy in Leprosy.—Osawa and Nojima report good results from sympathectomy in ulcers and neuralgias in the nervous forms of leprosy.

53: 93-132 (Jan. 14) 1927

Serology and Protein Treatment. H. Sachs.—p. 93. C'td.
Colitis. W. Zweig.—p. 95.
Early Infiltration, Tuberculosis of Apex and Tuberculosis in Adults. F. Redeker.—p. 97.
Grave Hysteria. A. Brauchle.—p. 99.
Criticism of Interferometry. A. Streck.—p. 101.
Reinfection in Experimental Syphilis. R. Nothhaas.—p. 102.
Goiter in Adolescents. F. W. Bach and H. Müller.—p. 104.
*Pathogenesis of Trypanosomiases. K. Schern.—p. 106.
*Failure of Tetanus Antitoxin in Animals. A. Wolff-Eisner.—p. 107.
Multiple Sclerosis. E. Siemerling.—p. 108.
"Synthalin" in Ambulatory Practice. P. Hirsch-Mamroth and G. Perlmann.—p. 110.
Therapeutic Intravenous Injections of Virulent Tubercle Bacilli. P. Wichmann.—p. 110.
*Roentgen-Ray Examination of the Esophagus. S. Schereschewsky.—p. 111.
Plaster of Paris Beds. H. Richter.—p. 111.
Reaction Limits of Syphilis Flocculation Tests. H. Lehmann-Facius.—p. 113.
Intestinal Origin and Treatment of Acne Rosacea. P. Ruhnke.—p. 113.
Pharmacotherapy in Gynecology and Obstetrics. E. Pribram.—p. 114. C'cn.
Standardization of Syringes. P. Wolff.—p. 116.
Legal Significance of "Traumatic Neurosis." Knoll.—p. 117.
Surplus of Physicians in Denmark. H. Scholz.—p. 119.

Pathogenesis of Trypanosomiases.—Schern observed that trypanosomes kept in blood cease to move after a time, but are revived by addition of fresh serum or of a liver extract. Later investigation showed that the active substance is sugar, which is absent from the liver in animals that died of trypanosomiasis. It seems that hypoglycemia is a regular occurrence in trypanosomiasis, which may explain some of the symptoms (convulsions, delirium, hepatic coma). Therapeutic experiments are being made.

Failure of Tetanus Antitoxin in Animals.—Wolff-Eisner found with Jahr that normal horse serum does not modify the outcome of tetanus infection in mice and rats. They were, however, surprised to find that enormous doses of antitoxin given before, simultaneously or after the infection had hardly any effect. They point out that this is at variance with the unquestionable preventive value of the serum in man. It is significant that the body cells of rats and mice have very little power to bind tetanus toxin. It seems therefore that the action of antitoxin depends on the cellular activity of the organism.

Roentgen-Ray Examination of the Esophagus.—Schereschewsky found that an inspiration made at the moment when the contrast substance reaches the cardia stops its further progress. This gives the diagnostician more time for observation of this part of the esophagus than he would otherwise have.

Jahrbuch für Kinderheilkunde, Berlin

115: 1-126 (Jan.) 1927

*Edema and Nephrosis. K. Stolte and H. Knauer.—p. 1.
*Urobilin and Blood Transfusion. H. Opitz and K. Choremis.—p. 23.
Experimental Rickets. P. György and M. Jenke.—p. 68.
Sedimentation Test. W. S. Wail.—p. 79.
Factors Influencing the Dick Test. J. Paunz and E. Csoma.—p. 95.

Edema and Nephrosis.—Stolte and Knauer used Epstein's diet successfully in treatment of children with albuminuria and edema, but with approximately normal amounts of residual nitrogen and low blood pressure. The edema as well as the albuminuria improved almost immediately after the administration of meat.

Urobilin and Blood Transfusions.—Opitz and Choremis determined the urobilin content of the stool and urine in healthy and sick children and in dogs. Addition of meat to a mixed diet increased the elimination of urobilin. Fat was without influence. Anemias of different types (alimentary, including the goat milk and the Jaksch types and lymphogranulomatosis) were, with rare exceptions, associated with

increased urobilin excretion. Blood transfusion did not increase it except when there were indications that the blood was not retained. Venesection decreased the urobilin elimination. Injections of blood or plasma may not only increase the total amount of urobilin excreted, but may result in a relative increase in the amount of urobilin in the urine as compared with that in the stool (instead of the normal ratio of from 1:30 to 1:60). This would speak for a transitory disturbance of hepatic function, due to the transfusion.

Klinische Wochenschrift, Berlin

6: 49-96 (Jan. 8) 1927

Neuroses. P. Schilder.—p. 49.
*Pituitary and Central Regulation of Gonads. P. Liebesny.—p. 52.
Desensitization in Hay Fever. L. F. Loeb and H. Petow.—p. 57.
*Emmenagogue Action of Ovarian Hormone. S. Loewe.—p. 59.
Immunity in Experimental Recurrens. R. Strempel and G. Armuzzi. —p. 62.
Activation of Food with Ultraviolet Rays. F. Rohr and O. Schultz. —p. 64.
*Danger of Insulin Hypoglycemia in Children. R. Priesel and R. Wagner.—p. 65.
Wassermann Reaction of Breast Milk. H. G. Rottmann and H. Franken. —p. 66.
Prevention of Tuberculosis. F. Hamburger.—p. 68.
Reply. B. Lange.—p. 68.
"Tissue Respiration in Vivo." R. H. Kahn.—p. 69.
Reply. E. Meyer and A. Reinhold.—p. 70.
Vaccine and Herpes. S. Zurukzoglu.—p. 70.
Effect on Blood Sugar of Vegetable Extract by Mouth. S. Éderer. —p. 72.
Glycosuria from Insulin. P. Hecht and P. Bonem.—p. 72.
Incarcerated Hernia of the Lung. Koennecke.—p. 73.
Fixed Drug Exanthemas. O. Naegeli.—p. 73.
Hygiene and Roentgen-Ray Examinations in Bronze Factories. E. Krüger and E. Saupe.—p. 77.
Standardization of Dressings. A. Lohmann.—p. 94.

Pituitary and Central Regulation of Gonads.—Liebesny found in the majority of patients with primary insufficiency of sex glands low basal metabolic rates with increased specific dynamic action of proteins. These metabolic rates approached the normal figures in patients in whom treatment (Doppler's chemical "sympathectomy" or diathermy of testes) was successful. Diathermy of the pituitary region proved useful in some of the patients with hypofunction of the gonads, in whom the specific dynamic action was low. It is possible that the brain centers play a greater rôle than the pituitary in these cases.

Emmenagogue Action of the Ovarian Hormone.—Loewe points out that the ovarian hormone promotes only the building up of endometrium. Menstruation, which is the destructive phase, is due to cessation of this influence. Therefore the therapeutic administration of the hormone should be interrupted periodically to obtain an emmenagogue effect. Some cases of amenorrhea might be due perhaps to overproduction or overdosage of the hormone—rather than to its absence. The commercial preparations contain too little hormone to be active in castrated women: About 2,000 mouse units would have to be injected daily to obtain an effect. In mere hypofunction of the ovaries, smaller doses (perhaps 100 units) might help.

Danger of Insulin Hypoglycemia in Children.—Priesel and Wagner believe that death from hypoglycemia in a diabetic child might be prevented if a large dose of dextrose were injected immediately on the appearance of threatening symptoms: for instance, at least 20 cc. of a 33 per cent solution, intravenously. If considerable improvement does not take place instantaneously, they inject from 100 to 200 cc. of a 10 per cent solution beneath the skin. When the patient regains consciousness, he should be given fruit or bread.

Medizinische Klinik, Berlin

23: 1-40 (Jan. 7) 1927

*Tumors of Frontal Lobes. M. Nonne.—p. 1.
*Origin of Hypernephroid Kidney Tumors. L. Pick.—p. 3.
*Metabolic Disturbances After Encephalitis. H. Holzer and O. Klein. —p. 8.
Concave Versus Convex Glasses in Myopia. W. Gilbert.—p. 11.
Anacidity. G. Holler.—p. 13.
*Paravertebral Injections and Kidney Function. K. Lion.—p. 15.
"Sanocrysin" in Surgical Tuberculosis. P. Cokkalis.—p. 17.
"Heredity" in Rabbit Syphilis. P. Uhlenhuth and H. Grossmann.—p. 18.
Injury and Sarcoma. R. Gantenberg.—p. 24.
Infectious Diseases. H. Ziemann.—p. 26.
German Pharmacopeia. J. Pohl.—p. 38.

Tumors of Frontal Lobes.—Nonne's patient had had pain in the forehead and had been trephined. A tumor was not found, but she did not have headaches afterward. Nine years later she became asocial and irritable, later on euphoric and inclined to foolish jokes. There were not any signs of compression of the brain—not even headaches; but a slight change was noticed in the cerebrospinal fluid obtained from the cisterna. Antisyphilitic treatment did not improve her condition. The mental changes alone were suggestive of a tumor affecting the frontal lobes. A tumor was found, the size of a billiard ball, but the patient died as a result of the intervention.

Origin of Hypernephroid Kidney Tumors.—Pick reports the case of a tumor of the kidney with a central part containing ganglion cells and with a typical hypernephroid cortex. It can be explained only by neoplastic development of aberrant suprarenal tissue. This is another point in favor of the theory that the Grawitz tumors not only resemble the suprarenals in structure but actually are of suprarenal origin.

Metabolic Disturbances After Encephalitis.—Holzer and Klein observed various disturbances of metabolism in a boy, aged 19, with slight parkinsonism. The basal respiratory metabolism was about 22 per cent below normal, the carbohydrate tolerance was increased; there were periods of oliguria and edema which were almost independent of water and thyroidin intake. Lymphocytosis was pronounced. A marked leukopenia followed the administration of 200 Gm. of milk.

Paravertebral Injections and Kidney Function.—Lion found increased peristalsis of the ureters and diuresis after paravertebral injections (eleventh dorsal; less in case of the twelfth dorsal and first lumbar segment). The injection relieves renal colic, and may act well in pyelitis, especially if associated with small calculi. He did not get any results in nephritic anuria.

Münchener medizinische Wochenschrift, Munich

74: 1-48 (Jan. 7) 1927

Fundamentals of Internal Medicine. W. H. Veil.—p. 1.
Blood Groups. H. Sachs.—p. 4.
Hypertension in Young Persons. O. Moog and K. Voit.—p. 9.
Stenosing Tendovaginitis on the Styloid Process of the Radius. O. Winterstein.—p. 12.
Level of Fluid in Hydropneumothorax. A. Genersich.—p. 17.
*Tonus of Heart Muscle. J. S. Schwarzmann.—p. 19.
Fixation of the Cervix of the Uterus. R. Popken.—p. 19.
Colloids in the Analysis of Sediments and Diagnosis of Leukorrhea. A. Marchionini.—p. 21.
Treatment of Vaginal Leukorrhea. W. Schmitt.—p. 22.
Reaction of Vaginal Secretion and Gonorrhea. W. Leipold.—p. 25.
The Grebe-Martius Ionimeter. H. von Hecker.—p. 26.
Serotherapy of Scarlet Fever. A. W. Krause.—p. 27.
New Apparatus for Examination of Cerebrospinal Fluid. V. Kafka and R. Weiss.—p. 27.
Diabetes and Life Insurance. F. Umber and M. Rosenberg.—p. 28.
Assistants' Associations. F. Bauer.—p. 31.

Tonus of Heart Muscle.—Schwarzmann auscultates the heart while asking the patient to pull with both hands on a rubber hose. In healthy subjects and in patients with hypertrophy of the left ventricle, the heart rate increases only a little and the sounds may be stronger as long as the tonus of the heart seems to be good. When the tonus of the heart muscle is weak, the heart rate is accelerated and the sounds become dull. The second sound almost disappears in the first. The results of the Valsalva experiment differ from these.

Virchows Archiv für path. Anat. und Physiol., Berlin

262: 565-857 (Dec. 10) 1926

Three Cases of Congenital Anomalies of the Hand. M. Apfelthaller.—p. 565.
C'oma of the Infundibular Region. C. Hausmann.—p. 572.
Unusual Proliferations of Bronchial Epithelium and Bronchiectasis. W. Pagel.—p. 583.
Morphologic Reaction of the Thymus to the Introduction of a Foreign Body. V. Wituschinski.—p. 595.

Collateral Circulation of a Heart with One Coronary Artery. G. Grätzer. —p. 608.
Peptic Ulcer in the Stomach of the Calf. G. E. Konjetzny and H. Puhl. —p. 615.
Thrombosis of Renal Veins. K. Schröder.—p. 634.
Sclerosis of Coronary Artery. K. Bork.—p. 646.
Pathogenesis and Etiology of Phlebosclerosis. W. Schilling.—p. 658.
Agranulocytosis. H. Baltzer.—p. 681.
*Enucleation of Normoblasts. T. Ssyssojew.—p. 690.
Acute Leukanemia with Increased Extra-Medullary Blood Formation. G. Seemann and A. Krasnopolski.—p. 697.
Lipoids of the Fallopian Tube. H. E. Scheyer.—p. 712.
Endometriosis. R. de Josselin de Jong.—p. 735.
*Placental Transmission of Lymphogranuloma. A. Priesel and A. Winkelbauer.—p. 749.
Reactive Changes in the Bone Marrow in Septic Diseases. K. I. Anselmino.—p. 766.
Multiple Psammoma Granules in Omentum, Serosa and Tubes in Arenoid Pelvic Peritonitis. R. Cordua.—p. 783.
Biliary Cirrhosis and Other Forms of Hepatic Cirrhosis. S. M. Zypkin. —p. 791.
Histopathology of Herpes Simplex. E. Lauda and F. Rezek.—p. 827.
Histology of Saponin Poisoning. V. Kollert and P. Rezek.—p. 838.

Enucleation of Normoblasts Under Pathologic Conditions.—Syssojew studied the hemopoietic organs, principally the bone marrow, of rabbits that had been given cholesterol, dissolved in sunflower oil, or that were poisoned with pyrogallic acid or a mixture of toluylendiamine and pyridin. A marked erythroblastic reaction occurred, with a large number of normoblasts besides various transition states between hemocytoblasts and erythrocytes and between basophilic and polychromatophilic erythroblasts. The normoblasts were present in the spleen and suprarenals, but principally in the bone marrow. They presented nuclear changes, characterized by degeneration, pyknosis, division into single chromatinic bodies, karyolysis, complete dissolution and finally emigration of the nucleus, either en masse or in fragments. Examination of human bone marrow immediately after death in ten cases of gas gangrene, twenty cases of acute infectious disease and five cases of anemia confirmed the results of the experimental investigations. Enucleation of normoblasts under pathologic conditions is affected either by karyolysis or by emigration.

Placental Transmission of Lymphogranuloma.—Priesel and Winkelbauer's patient, a woman aged 31, presented painless tumors on the right side of the face, in the right subclavicular region, in the abdominal wall of the epigastric region and in the right inguinal region. On examination of the blood, a slight leukocytosis without anemia was found. The abdominal tumor was removed and histologic examination revealed lymphogranuloma. The temperature of the patient remained high during the time she was in the hospital and she died shortly after discharge. A few weeks earlier she had been delivered of a girl who in the third month of life developed a soft tumor over the left eyebrow and inguinal hernia on the left side, containing a hard tumor the size of a hazel-nut. The abdomen was distended and there was moderate bronchitis. The child died at four and one-half months of age, presenting typical lymphogranuloma. The postmortem examination showed extended infiltration of the skeleton, partly periosteal, partly central, with destruction of the bones, especially of the skull and face. The liver was invaded by periportal and retroperitoneal lymph nodes; there were neoplastic infiltrations in the thymus and the right ovary and nodes of typical granulation tissue in the omentum and peritoneum. Histologically all these infiltrations were of the same nature. The respiratory and gastro-intestinal tracts and the spleen were normal. This is the first evidence that lymphogranuloma can be transmitted from man to man or, in special cases, through the placenta from mother to child.

Wiener klinische Wochenschrift, Vienna

40: 1-44 (Jan. 6) 1927

History of Treatment of Syphilis. W. Kerl.—p. 1. C'td.
Ectopic Pregnancy at Full Term. H. Eymer.—p. 5.
Development of Fatty Tissue in the Visceral Pleura. G. B. Gruber. —p. 8.
*Veratrum Poisoning. C. Ipsen.—p. 10.
Backache in Women. F. Kermauner.—p. 15.
*Saponin Hemolysis. L. Kofler and Z. Lázár.—p. 16.
Murder and Simulation of Psychosis. F. Reuter.—p. 18.
Choroidal Neurocele. M. Salzmann.—p. 20.
By-Effects of Salves Used Around the Eye. R. Seefelder.—p. 23.
*Treatment of Hemophilia. F. Trauner.—p. 24.
Therapeutic Malaria. J. Wagner-Jauregg.—p. 26.
Pathology of the Knee Joint. A. Wittek.—p. 27.
Professional Secrecy. K. Kerschensteiner.—p. 28.
Digestive Tract in Old People. H. Schlesinger.—p. 31.
Eczemas in Children. C. Leiner. Supplement.—pp. 1-16.

Veratrum Poisoning.—The judge insisted that poisoning by strychnine had been attempted, but Ipsen found veratrum. This was confirmed later by the confession of the guilty woman—who had chairvoyantly predicted two deaths in her family. Only the fact that three people drank the coffee intended for one prevented death. The symptoms were nausea, vomiting and contraction of the fingers.

Saponin Hemolysis.—Kofler and Lázár found that different saponins acted differently on samples of blood from various species. For instance, saponinum purissimum dissolves human corpuscles better than sheep corpuscles, while helleborein acts in the opposite manner.

Treatment of Hemophilia.—Trauner found that thorough lavage of the colon may stop dangerous hemorrhages after extraction of teeth in bleeders.

Zeitschrift f. d. ges. experimentelle Medizin, Berlin

53: 287-598 (Dec. 9) 1926

*Blood Proteins and Antigenic and Nonantigenic Substances. P. Wichels. —p. 287.
*Thermoregulation and Fat Metabolism. W. Raab.—p. 317.
Action of Thyroid Incretion. E. Herzfeld.—p. 332.
*Influence of Protein Bodies on the Cells in the Peritoneal Fluid. H. Hirschfeld and A. Hittmair-Wels.—p. 382.
Nonspecific Cutaneous Hypersensitiveness in Tuberculosis. K. Hajós and A. Korányi.—p. 389.
Interfereometric Diagnosis of Pregnancy. K. Hellmuth.—p. 395.
Mechanism of the Secretory Process. F. Bricker.—p. 411.
Metabolism and Blood Changes After Nephrectomy. K. Beckmann et al. —p. 420.
Mechanism of Origination of Pain in the Liver M. M. Gubergritz et al. —p. 431.
*Variations in Basal Metabolism. A. Bornstein and H. Völker.—p. 439.
*Influence of Narcotics on Basal Metabolism. A. Bornstein and K. Holm. —p. 451.
The Function of the Gallbladder. H. Kalk and W. Schöndube.—p. 461.
*Variations in the Distribution of Leukocytes in the Blood Stream. E. Wollheim.—p. 484.
*Influence of the Splenic Hormone on Erythrocytes. D. F. Okunew.—p. 513.
Water Metabolism. K. Gollwitzer-Meier and R. Rabl.—p. 525.
Streptococcus Infection and the Reticulo-Endothelial System. N. Louros and H. E. Scheyer.—p. 548.
*The Fermentative Mechanism of Insulin Resistance. F. Rosenthal and R. Behrendt.—p. 562.
Basal Metabolism and Body Surface. E. Helmreich.—p. 578.
Anatomic Changes in the Brains of Syphilitic Rabbits. S. Bergel.—p. 587.
Anaphylaxis and Roentgen Irradiation. K. Hajós.—p. 597.

Influence of Antigenic and Nonantigenic Substances on the Protein Bodies in the Blood.—In fifteen persons, some healthy and some sick, Wichels studied changes in the albumin-globulin ratio in the blood after parenteral administration of the subject's own erythrocytes, of nonantigenic, crystalloid stimulation substances (10 per cent sodium chloride), of antigenic substances (typhoid vaccine and diphtheria antiserum) and after alternating injections of antigenic and nonantigenic substances. The allergic organism responded to such stimulus by displacement of the protein fractions in the blood serum toward the side of more coarse dispersion, the anergic organism in the opposite way. It was immaterial whether an antigenic or a nonantigenic substance was used for the first injection. In allergic individuals a second injection, given from eight to ten days after the first, produced globulinemia, whether the stimulus was antigenic or nonantigenic. In the anergic organism the nature of the substance first injected determined the later reaction. If this were a nonantigenic substance, the second injection was followed by albuminemia, i. e., the organism remained anergic. If the first stimulus applied was of antigenic nature, the organism became allergic and responded with globulinemia to a second injection of a stimulating substance, whether antigenic or nonantigenic. The results seem to have a certain practical value in the prophylactic use of serum to effect desensitization. A patient who responds with albuminemia to injection of 10 per cent sodium chloride and who, consequently, is anergic, can receive serum treatment without

danger. If, on the other hand, globulinemia occurs and serum has been previously injected, precautions have to be taken in the use of the same kind of serum.

Thermoregulation and Fat Metabolism.—In a previous paper Raab reported that administration of extracts of the intermediary lobe of the pituitary gland produced a marked decrease of blood fat, which persisted for several hours. Continuing the experiment on dogs, he found that preliminary administration of substances which paralyze the heat center, such as antipyrin, acetylsalicylic acid and amidopyrin completely abolished the effect of solution of pituitary (pituitrin) on the blood fat. The decrease in temperature produced by the antipyretics was not influenced by solution of pituitary. Quinine, which has a peripheral action, slightly diminished the effect of solution of pituitary in some of the experiments, but not in others; it also produced a decrease in temperature. Heat center puncture produced a more or less pronounced decrease in the blood fat during the persistence of hyperthermia. The author concludes that one of the functions of the heat center situated in the tuber cinereum is to stimulate intrahepatic combustion of fat, and that the tonus of this function is regulated by the secretion of the intermediary lobe of the pituitary.

Influence of Proteins on the Cells in the Peritoneal Fluid.—Hirschfeld and Hittmair-Wels produced a neutrophilic leukocytosis in rabbits and rats by intramuscular injection of milk. The injection was followed by marked changes in the cellular composition of the peritoneal fluid. Neutrophilic or eosinophilic leukocytosis occurred or there was a simultaneous increase in both types of cells. The authors do not offer an explanation of the phenomenon.

Variations in Basal Metabolism.—Bornstein and Völker studied the respiratory metabolism in a large number of persons, some healthy and some sick. They noted daily rhythmic variations in metabolism, which occurred independently of sleep and of movement.

Influence of Narcotics on Normal and Pathologically Increased Metabolism.—In experiments on healthy persons and patients suffering from exophthalmic goiter, obesity, thyrotoxicosis, etc., Bornstein and Holm found that chloral lowered the basal metabolism. The higher the metabolism, the greater was the decrease. Arsenic compounds, bromides and morphine produced similar changes. The increase in the basal metabolism in severe exophthalmic goiter is dependent partly on increased oxidation energy of the cell, partly on increase in muscle tension and in reflex and psychic excitability.

Changes in the Distribution of Leukocytes in the Blood Stream.—Wollheim administered from 100 to 200 cc. of milk to normal dogs and cats. He noted an increase of potassium in blood from the liver and an alimentary leukocytosis in the peripheral blood Under similar conditions bilaterally vagotomized animals presented an increase in calcium and an alimentary leukopenia. Injection of small amounts of potassium chloride into the portal vein was followed by increase of leukocytes in the peripheral blood and decrease of leukocytes in the blood of the liver. Injection of calcium chloride into the portal vein produced, inversely, increase of leukocytes in the blood of the liver and decrease in the peripheral blood. Injection of potassium or calcium chloride into the duodenum in the human being produced the same effect as injections into the portal vein in animals.

Effect of the Splenic Hormone on Erythrocytes and Erythropoiesis.—Okunew studied the effect of splenic extracts obtained from cats on the blood of five healthy persons and six patients. In normal and pathologic conditions the splenic hormone effected an increase in the resistance of erythrocytes to hypotonic salt solutions. Decrease of osmotic resistance of erythrocytes shows that the spleen has lost its specific influence on the blood. This might be useful as one of the indications for splenectomy.

The Fermentative Mechanism of Insulin Resistance.—In experiments on fasting rabbits, Rosenthal and Behrendt found that when fresh pus was mixed with insulin and injected subcutaneously, the influence of the insulin was abolished. One cubic centimeter of fresh pus destroyed the effect of 500 units of insulin in fifteen minutes. They mixed insulin with pus that had been boiled and that, in its original condition, destroyed the effect of 500 units of insulin in fifteen minutes, and kept the mixture at 56 C. for twenty-four hours; the action of the insulin on the blood sugar was not affected. Leukocytes of rabbit blood produced the effect considerably more slowly than did human pus, perhaps because the amount of proteolytic cell ferments present in the leukocytes of rabbit blood is smaller. Addition of 5 cc. of active human serum to 1 cc. of pus, diluted one to ten, did not inhibit the power of the leukocytes to destroy insulin. It is possible that leukocytic ferments participate in the production of the insulin resistance of the diabetic organism, especially in suppurative infection. Digestion of insulin with suspensions of the liver, spleen and kidney also abolished its influence on blood sugar. Proteolytic cell ferments, which are liberated and participate in increased cell destruction, possess the property of destroying insulin, like the proteolytic ferments in the digestive canal.

Zeitschrift f. d. ges. Neurologie u. Psychiatrie, Berlin

106: 325-482 (Dec. 15) 1926

Familial Constitution in Dementia Praecox. A. Hutter.—p. 325.
*Epinephrine in Diagnosis of Late Syphilis. O. Muck.—p. 351.
Apoplexy of the Brain in a Malaria Patient. B. Mankowski and P. Bereschansky.—p. 361.
A Typical Radicular Symptom in Compression Fracture of a Lumbar Vertebra. H. Pette.—p. 371.
*Disposition to Chronic Alcoholism. F. G. Stockert.—p. 379.
Psychobiology of Marriage of Drunkards. O. Kant.—p. 401.
Standardization of the Mastic Reaction. W. Schmitt.—p. 411.
Frambesia, Syphilis and Paralysis. F. Jahnel and J. Lange.—p. 416.
Schizophrenic Psychoses in Epidemic Encephalitis. H. Bürger and W. Mayer-Gross.—p. 438.

Epinephrine in Diagnosis of Late Syphilis.—Muck irritated the mucous membranes of the nose with a sound dipped in a 1:1,000 solution of epinephrine. The normal reaction in healthy persons was a vasomotor reflex, characterized by hyperemia of the mucous membrane, which disappeared in from one to fifteen minutes. In migraine, epilepsy, certain cases of pregnancy with hypertonia, brain injury and syphilis, white lines appeared on the mucous membranes, caused by excitability of the sympathetic nerves of the brain vessels. In 150 cases of late syphilis under treatment, 86 per cent presented distinct white lines. In only 41 per cent was the Wassermann reaction positive.

Disposition to Chronic Alcoholism.—Excluding epileptics and the insane, Stockert noted in alcoholics every transition state between debilitated and neurotic and normal persons. He differentiates between social drinkers and drunkards. The drunkards are again separated into two different groups. The first group is composed of debilitated, indifferent and coarse persons, who drink because it is the easiest way to obtain pleasure and abolish sensations of depression. They do not have any scruples about drinking and do not see any reason to stop. The second group consists of psychopaths, who fight against their desire for alcohol, but are unable to stop drinking after the first glass. They are asocial, depressed and sensitive persons, who are able to adjust themselves to their surroundings only when in an intoxicated condition.

Zentralblatt für Gynäkologie, Leipzig

50: 3185-3248 (Dec. 11) 1926

*Friedländer's Bacillus in Gynecologic Diseases. H. E. Scheyer.—p. 3186.
*The Man's Saddle vs. the Side-Saddle for Women. K. Heim.—p. 3192.
Vaccine Infection of the Vulva. R. Joachimovits.—p. 3193.
Angioma of the Placenta. H. O. Neumann.—p. 3195.
Treatment of Postpartum Hemorrhage from Retained Blood Clots. E. A. Koch.—p. 3199.
Method of Hemostasis in Gynecologic Operations. K. Logothetopulos.—p. 3202.
Conduct of the Third Stage of Labor. J. Werboff.—p. 3204.

Friedländer's Bacillus in Pyosalpinx.—Scheyer's patient, aged 62, suffered from bilateral salpingitis and parametric abscesses. Pure cultures of Friedländer's bacillus were obtained from the lesions. She had had ozena for twenty-five years and the same bacillus was found in the nasal secretion.

Scheyer believes that the genital infection took place by way of the anus, from micro-organisms swallowed in nasal secretion. Following dilatation of the cervix in the course of diagnostic procedures, there occurred a mixed infection with hemolytic streptococci (demonstrated in the vagina) which lead to a flare-up of the inflammatory process and perforation of the pyosalpinx, followed by peritonitis and death.

Shall Women Ride Astride?—Heim, disagreeing with Wiegel's recent expression of opinion, sees no harm in the use of the man's saddle by women.

50: 3249-3312 (Dec. 18) 1926

The Occipitosacral Position. H. O. Neumann.—p. 3250.
*Fetal Diphtheria. M. Traugott.—p. 3255.
Rectal Examination During Labor. O. Fahlbusch.—p. 3258.
Fatal Hemorrhage in Abortion. P. Schneider.—p. 3264.
*Relations Between the Color of the Hair and Menstruation and Parturition. H. Schlösser.—p. 3268.
Encapsulated Ascaris Remnants Simulating Subserous Uterine Myoma. Hendriock.—p. 3274.
Lactic Acid in the Blood in Pregnancy. A. Loeser.—p. 3278.
Colorimetric Determination of Lactic Acid in the Blood. B. Mendel.—p. 3279.

Fetal Diphtheria.—This case Traugott believes to be the first reported in the literature in which diphtheria was transmitted from the mother to the child in utero. A woman, three months pregnant, was taken ill with symptoms of diphtheria and diphtheria bacilli were found in swabbings of the throat. Two days after the onset, she was given an injection of serum, to which she responded by prompt recovery. A second examination for diphtheria bacilli in the throat, six days from the onset, was negative. Five days later, however, there was a slight rise in temperature and after another six days the patient had a chill and her temperature rose to 40 C. About thirty hours later she was delivered of a newly dead embryo. The mother recovered. At necropsy on the embryo, numerous bacilli resembling diphtheria bacilli in shape, disposition and staining qualities, were found in the peritoneal exudate. Owing to an accident, cultures were not made. Culture of the blood of the umbilical cord proved negative. The liver was enlarged and on its surface were numerous yellowish specks, which proved to be nests of bacilli resembling diphtheria bacilli. The placenta was normal, apart from hemorrhagic infarction. Traugott does not believe that the bacilli passed through the chorion, which was healthy and uninjured. He thinks it more probable that they made their way from the mother's blood into the intervillous space, where they multiplied as on a culture medium. The placenta became partially detached, either by the direct action of the bacteria or from the uterine contractions set up by the mother's illness. Through the chorionic vessels, thus opened, the bacilli arrived in the umbilical vein and were, for the most part, deposited in the liver. Their multiplication here resulted in peritonitis and death of the embryo. The labor contractions occasioned by the death of the embryo pressed the bacilli out of the intravillous space back into the circulation of the mother, resulting in a chill and fever, but in no further development of the infection because of her recent immunization.

The Importance of the Color of the Hair in the Woman's Constitution.—Aschner has pointed out the great importance of the color of the skin and hair in the study of constitution, but up to now little has been done in this field of research. Schlösser's investigations of the relation of the color of the hair to menstruation, weak labor pains and the third stage of labor were made on 577 women at the end of pregnancy. Both irregular menstruation and menorrhagia were found to be most frequent in the red-blonds, least frequent in the black haired. Among the women with weak labor pains, the red-blonds again occupied the first place. The duration of the third stage of labor was over an hour in fifteen women (2.6 per cent). Here again the red-blonds stand first (13.6 per cent), the black haired come next (5.6 per cent), the brown haired, and the dark and light blonds are bracketed (2.3 per cent). Five and three-tenths per cent of the black and brown haired women lost less than 50 cc. of blood, in only 1.3 per cent of the light blond women was the loss of blood so slight. Between 500 and 700 cc. was lost by 30.4 per cent of the red blonds, by 15.4 per cent of the light blonds, by 5.7 per cent of the black or brown haired or dark blond women. More than 1,000 cc. was lost by thirteen patients. The order of frequency here is the same as just given, except that the black haired are not represented.

Zentralblatt für innere Medizin, Leipzig

48: 89-104 (Jan. 22) 1927

*Respiratory Mechanism in Pneumothorax. G. Liebermeister.—p. 89.

Respiratory Mechanism in Pneumothorax.—Liebermeister found that the respiratory vital capacity in tuberculous patients depends on the extent of the pleural adhesions and of the disease foci. The insufflation of air in pneumothorax treatment lowered the vital capacity about 200 cc. less than would be expected from the volume of air (600 to 1,000 cc.) insufflated.

Nederlandsch Maandschr. v. Geneeskunde, Leyden

13: 609-668 (Dec.) 1926

Report of 1,247 Deliveries. H. R. Folmer.—p. 609.
*Distribution of Fat Injected into the Blood Stream. L. J. Del Baere.—p. 644.
*Benzidin Reaction in Diagnosis of Cancer of the Stomach or Intestines. D. E. Schouten.—p. 651.

Distribution of Fat Injected into the Blood Stream.—Del Baere injected an unsaturated fat compound, containing about 50 per cent of chemically bound iodine in gum arabic emulsions, into the ears of rabbits. The particles in suspension were of the size of normal chromocytes. Ten minutes after injection of 2 cc. of emulsion, corresponding to 82 mg. of iodine, the animals were bled to death. The blood was collected, the organs were dissolved in potassium hydroxide, and the iodine content was estimated. About 90 per cent of the injected fat was found in the blood, lungs, liver, spleen, kidneys and muscles, about 50 per cent of this was in the lungs and about 3 per cent in the blood. The smallest amounts were found in the muscles. Preparations of different organs for microscopic investigation, stained with sudan III and hematoxylin, showed that a large percentage of the fat had penetrated through the capillary membranes and was deposited in the cells. The distribution of the injected fat in the different organs corresponded to the distribution of tubercles in miliary tuberculosis.

The Benzidin Reaction and Diagnosis of Cancer of Stomach and Intestine.—Schouten presents seven cases of gastric and intestinal tumors in which the benzidin reaction for blood in the feces was always negative, although positive reactions were obtained for hemochromogen or hematoporphyrin by spectroscopic examinations. He emphasizes the diagnostic value of examination for hematoporphyrin for the interpretation of existing clinical symptoms in case the outcome of the benzidin reaction is negative. Hemoglobin is often decomposed to hematoporphyrin, which does not contain iron and consequently does not react with benzidin. The author advocates the use of Snapper's method for spectroscopic examination of the feces for blood. The intestinal canal is cleaned out with laxatives, constipation is induced, the patient is kept for a few days on a chlorophyl-free diet and forbidden to brush his teeth. A piece of feces the size of a chestnut is taken from the center of a portion, to avoid possible blood from hemorrhoids or fissures. The sample is ground in a mortar with acetone, extracted until the acetone extract becomes colorless, and filtered. The feces are now reextracted with a mixture of glacial acetic acid and ethyl acetate in the proportion of 1 to 3 and filtered. The extract is divided into two equal portions and used for spectroscopic examinations. One-fourth part of pyridin and two drops of yellow ammonium sulphide are added to the first portion. Ammonium sulphide reduces the extracted hematin to hemochromogen, which gives a sharp adsorption band at a wave length of 560 millimicrons, between the yellow and the green in the spectrum. If the benzidin and the spectroscopic hemochromogen reactions are negative, the second portion is used for examination for porphyrin. One-fourth part of from 5 to 10 per cent of hydrochloric acid mixed with an equal amount of ether is added to the extract and agitated thoroughly. The mixture separates into two layers, the upper, etheric layer contains

acid hematin, if this is present. The other layer is used for spectroscopic examination for hematoporphyrin. The porphyrin spectrum is characterized by a thin adsorption band at from 605 to 595 millimicrons, between the red and yellow, and a broad band at from 565 to 550 millimicrons, between the yellow and green.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

71: 538-668 (Jan. 29) 1927

*"Synthalin." J. J. de Jong.—p. 541.
The Conception of Regression in Psychiatry. H. C. Jelgersma.—p. 551.
Heredity and Eugenics. G. P. Frets.—p. 556.
Icterohemorrhagic Spirochetosis. P. C. Cleyndert, Jr.—p. 562.
Idiosyncrasy to Mercury. E. Hildesheim.—p. 567.
Recent Work in Psychology. J. L. Dobberke.—p. 569.

"Synthalin."—Frank, Nothmann and Wagner have recently described a synthetic substitute for insulin. Studying the blood sugar effect of aminobuthylenguanidin, aminopenthylenguanidine and aminohexylenguanidine, they found that lengthening the methylene chain in the molecules of guanidine compounds increased the hypoglycemic effect of the substances and decreased the toxic effect. In this way they prepared a compound with somewhat slower but more lasting action than insulin, which they call "synthalin." De Jong studied the properties of the preparation on two diabetic patients, aged 70 and 61. Peroral administration of "synthalin" decreased the glycosuria, in proportion to the amount administered; the decrease was 0.40 and 0.55 Gm. of dextrose respectively per milligram of "synthalin." The blood sugar showed also a regular decrease. The preparation had a cumulative effect which lasted for twenty-four hours, and which was first noticeable a few hours after the administration. It cannot, therefore, be used in diabetic coma, where a rapid decrease of the blood sugar is desired. It is especially useful in treatment of patients with a high insulin resistance. The great advantage of "synthalin" is that it can be administered perorally.

Acta Medica Scandinavica, Stockholm

65: 209-389 (Jan. 26) 1927

*Acid-Base Metabolism. K. Eriksen et al.—p. 209. In English.
Distribution of Blood Sugar. R. Ege and K. M. Hansen.—p. 279. In English.
Bronchography in Tuberculosis. C. Grill.—p. 300.
Scarlet Fever Epidemic. S. Hesser.—p. 324.
Albuminuria in Chronic Nephritis. J. Frandsen.—p. 341.
Polyarthritis and Tonsillitis. O. Holsti.—p. 352. In English.
Focal Lesions in the Medulla. A. Grönberg.—p. 362.
Pathology of Healed Pulmonary Tuberculosis. A. F. Lindblom.—p. 374.

Acid-Base Metabolism.—Eriksen, Levinsen and Warburg conclude from their theoretical and practical investigations that the syndrome of "dysregulation of ammonia" as suggested by Hasselbalch and made still less exact by Bisgaard and Nørvig, is neither specific for epilepsy and similar conditions nor constant in them. Insufficient function of the respiratory center is probably a frequent cause of dysregulation (variations in the relation between the ammonia-nitrogen ratio and the p_H of the urine). The whole theory of this relation is incorrect.

Finska Läkaresällskapets Handlingar, Helsingsfors

68: 1061-1148 (Dec.) 1926

Treatment of Diabetes. K. Petrén.—p. 1061.
Gastrocolic Fistula from the Radiologic Point of View. G. Jansson.—p. 1077.
Otitic Brain Abscess. A. af Forselles.—p. 1094.
Motor Branches of the Rami Anteriores of the Cervical Nerves. G. Hjelmman.—p. 1126.
Icterus Catarrhalis. J. Borg.—p. 1136.

69: 1-94 (Jan.) 1927

*Hematogenous Actinomycosis of the Tibia. A. Krogius.—p. 1.
*A Case of So-Called Lime Gout. M. Fock.—p. 12.
Mechanical Intestinal Occlusions. T. Eklund.—p. 24.
Tubal Fibromyoma. J. Meyer.—p. 43.
Dietetics and Treatment of Cancer. G. von Wendt.—p. 49.

Hematogenous Actinomycosis of Tibia.—Krogius reports the case of a woman, aged 29, whose symptoms were pain and swelling of the left knee, chill and rise in temperature. Three months earlier she had injured her knee and some time before that had had a premolar extracted. The lungs were normal and the urine did not contain sugar or albumin. Serous fluid obtained from the left knee by puncture did not contain bacteria. Roentgenologic examinations revealed regional destruction of the tibial metaphysis. The condition was diagnosed as chronic osteomyelitis. At operation the periosteum was found to be slightly thickened, but a subperiosteal abscess was not discovered. Removal of a thick layer of bone revealed an accumulation of yellowish gray pus with an unpleasant odor. The softened bone was removed and the cavity was enlarged as far as the bone marrow, which was of normal appearance. The temperature of the patient remained between 39 and 40 C. after the operation. Secretion of evil smelling pus from the fistula continued and swelling set in, which extended to the lower part of the thigh. An abscess of the leg was opened and, later, large amounts of pus were removed from the thigh. The general condition remained unchanged. About three months after the onset of the first symptoms, actinomyces were found in the pus from one of the fistulas. It was not possible to explain how the infection had entered the body. The lungs, the oral cavity, neck and abdomen did not suggest any primary actinomycetic foci. The patient was treated with roentgen-ray irradiations and potassium iodide. Abrasion of the fistulas showed that the process had not spread further into the tibial metaphysis or bone marrow, but had destroyed subcutaneous tissue and muscles. She died shortly after a repeated abrasion of the fistulas, about one year after the onset of the first symptoms. The fatal ending of the disease was not so much the direct result of the actinomycosis of the bone as of the secondary infection of the soft parts of the leg.

A Case of So-Called Lime Gout.—Fock's patient, a woman aged 44, had been suffering for ten years from hard deposits under the skin, severe pain in the joints, diarrhea and headache. By scratching the skin the patient was able to remove a grayish white substance, which solidified in the air. A psychic trauma in 1918 was followed by contracture of the hands and the patient's child, 10 months old, who was still being suckled, died in convulsions two weeks later. The deposits under the skin were found on the fingers, toes and arms. Their appearance was preceded by attacks of pain and local swellings. The condition of the patient remained unchanged during one year of hospital residence. Examination of some of the material removed from the right arm showed its composition to be: 57 per cent tricalcium phosphate, 17 per cent calcium carbonate and 23 per cent organic constituents. The periosteum and the bone itself did not show any pathologic changes.

Ugeskrift for Læger, Copenhagen

89: 39-72 (Jan. 20) 1927

*Treatment of Edema. P. Iversen.—p. 43.
Injection Treatment of Varicose Veins. V. Meisen.—p. 47.
Technic in Treatment of Varicose Veins. Hindsberg.—p. 56.
Central and Peripheral Neurofibromatosis. K. H. Krabbe and G. Tindinge.—p. 57.
Treatment of Burns. C. McDougal.—p. 59.

Treatment of Edema.—The factors which regulate the development of edema are the hydrostatic pressure of the capillaries, the colloid osmotic pressure of the blood and the permeability of the capillary wall. In treatment of edema Iversen differentiates between nephritic and cardiac edemas. The nephritic edema is caused by decrease in the colloidal osmotic pressure. The treatment should consequently be based on attempts to increase this pressure. Blood transfusions and diuretics had only a slight or transitory effect. He agrees with Epstein that the quantity of proteins in the diet should not be reduced. The kidneys excrete considerable amounts of albumin and the organism is in need of a large protein supply. There is no danger of retention of residual nitrogen in these cases. In patients with cardiac edemas it is important to decrease the hydrostatic pressure of the capillaries. This is effected by rest in bed and improving the circulation by means of cardiacs. Diuretics have a favorable influence on the resorption of cardiac edemas.